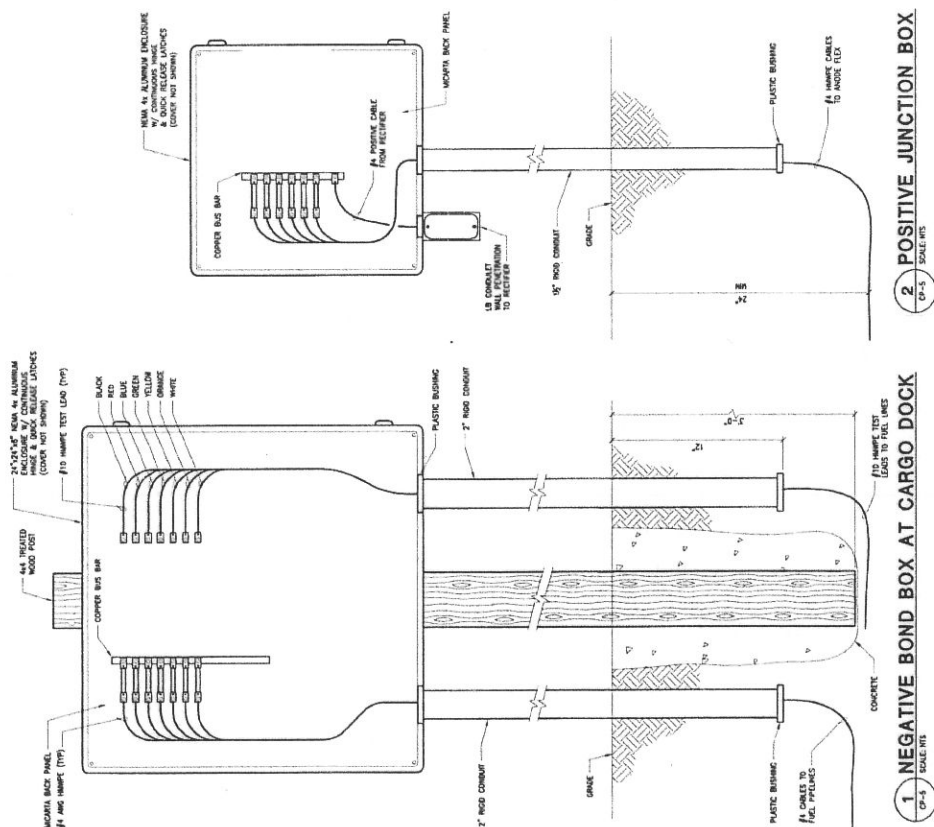
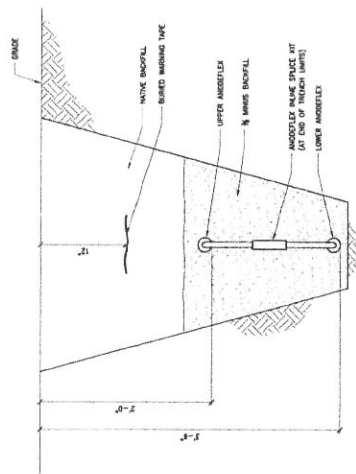
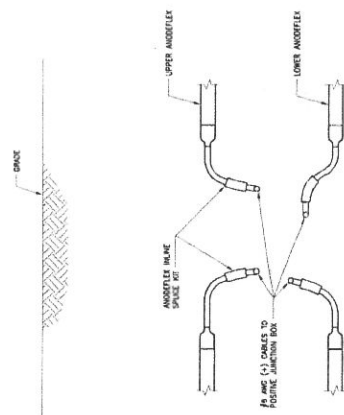




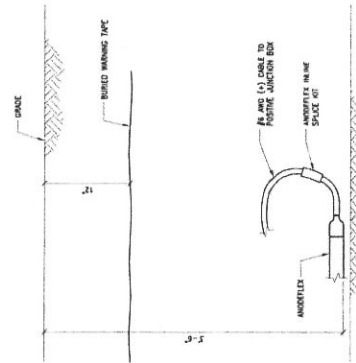
PRELIMINARY
FOR REVIEW ONLY



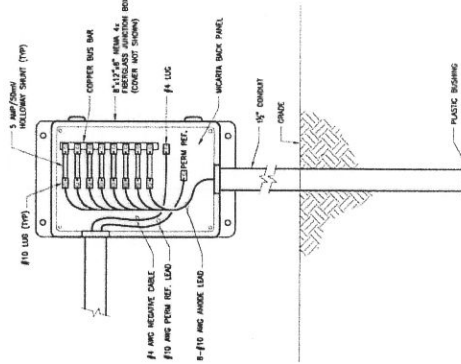
1 ANODEFLEX SPLICE DETAIL
CP-6 SCALE: NTS



2 ANODEFLEX SPLICE DETAIL AT RECTIFIER



3 ANODEFLEX DETAIL



4 MAGNESIUM ANODE JUNCTION BOX

3. BACKFILL AND COMPACT MOIST FRENCH AND SMALL BURRED WINNING TAPE 12-INCHES BELOW GRADE.

VOLTAGE STABILITY OF ± 10 MILLIVOLTS WITH 1.0 MEGAWATT LOAD AND A MINIMUM 20-YEAR SERVICE LIFE. REFERENCE ELECTRODES SHALL BE GAC STAPLES BAGGED CEMENT OR ENGINEER APPROVED EQUAL.

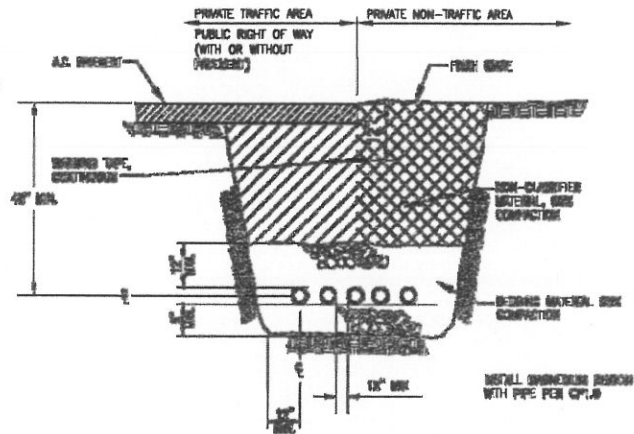
4. TIGHTEN ALL BOLTS TO MANUFACTURERS SPECIFIED TORQUE VALUES.

4. TIGHTEN ALL BOLTS TO MANUFACTURERS SPECIFIED TORQUE VALUES.

4. TIGHTEN ALL BOLTS TO MANUFACTURERS SPECIFIED TORQUE VALUES.

NOTES:

1. TRENCH WALL SLOPES WILL VARY WITH SOIL STRENGTH AND CHARACTERISTICS, SLOPE TO CONFORM TO SAFETY STANDARDS.
2. ON SITE DIRT OR MATERIAL MAY BE USED IN PRIVATE TRAFFIC AREA FOR CLASSIFIED BACKFILL UNLESS IT IS TYPE OF EXISTING MATERIAL.
3. CLASSIFIED MATERIAL TO BE TYPE BA PER THE MINORITY OF HIGHWAY STANDARD SPECIFICATION, SECTION 802.01.
4. EXISTING MATERIAL TO BE CLASS B EXISTING PER MINORITY OF HIGHWAY STANDARD SPECIFICATION, SECTION 802.01.



3 TRENCH EXCAVATION & BACKFILL
 81.2 71.9

FITTING LIST		
ITEM	QTY	DESCRIPTION
A	1	10" SEC. E-VENT @ 640000
B	1	3" NORMAL VENT
C	1	10" PRI. E-VENT @ 634600
D	2	2" PORT
E	2	4" PORT
F	2	6" PORT
G	1	24" MANWAY
H	1	2" LEAK DETECT
T	1	2" TANK DRAIN
AS DRAWN;		
GAL. CAPACITY		
50314		
50269		GAL. AFTER PICKUP TUBE LOSS
49246		GAL. USABLE AFTER FUEL SHUT OFF
		(90%)
44400		LESS DRY WEIGHT

50314	GAL. CAPACITY
50269	GAL. AFTER PICKUP TUBE LOSS
48245	GAL. USEABLE AFTER FUEL SHUT OFF (90%)
44400	LBS. DRY WEIGHT

REV:	DATE:	BY:	DESCRIPTION:
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Issued For Approval

The information on this document is intended to convey and document that the contract specification has been accurately interpreted and may not be accurate for construction purposes.

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**UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN INCHES
DO NOT SCALE**

DATE	NC	DATE	JL
	4-2-14		4-2-14

50K AK TANKS

100

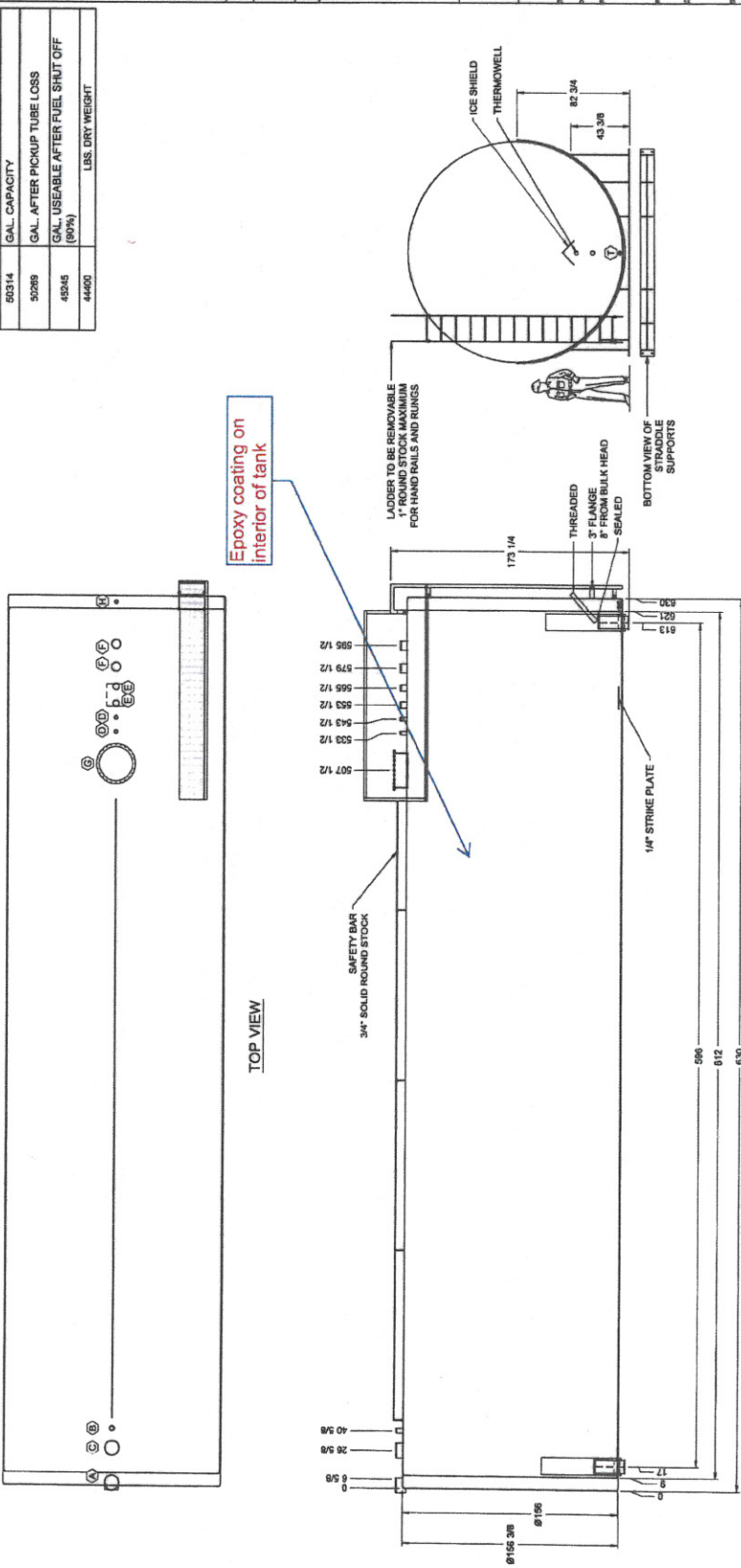
CRAIG DANIELSON

Q1403326

FC 000 11 4 10

30,000 UL-142
CYLINDRICAL TANK

19-01	A
SHEET 1 OF 1	



END VIEW

SIDE VIEW

GENERAL ASSEMBLY

SCALE = 1:0

19-01	A
CYLINDRICAL TANK	
SHEET 1 OF 1	



9095A Overfill Prevention Valve

The 9095A overfill prevention valve is designed to prevent overfilling storage tanks by providing a positive shut-off during a pressurized fill. The valve installs at the fill port of a storage tank and can be set to the desired shut-off level by using standard length pipe nipples.

Features

- Tight fill connection required. Top fill, remote fill, and dry disconnect connections available
- Installs on 4" or 6" schedule 40 NPT male riser connection
- Standard drop tubes (Morrison 419) are easily attached with included drop tube adaptor
- Field adjustable float (1½") for setting the precise level of shut-off
- Integral anti-siphon function
- Full flow to shut-off point
- Cushioned shut-off eliminates line shock
- Integral pressure relief feature allows for safe uncoupling at the completion of the fill operation
- Shut-off is activated by basic hydraulic principles
- 5 PSI and 5 GPM minimum flow requirements
- 2" flow rate is 183 GPM at 10 PSI pressure drop
- 3" flow rate is 566 GPM at 10 PSI pressure drop

A mechanical test mechanism is available as an option. The test mechanism allows a technician to pull on the test line at any time during the filling process to actuate the float, stop the fill, and verify the valve is working properly.

Size	Maximum Pressure	Maximum Viscosity
2"	100 PSI	150 Centistokes
3"	100 PSI	60 Centistokes

	Item Number	Valve Size	Tank Opening	Inlet Size & Type	Weight (lbs)
Top Fill	9095A-0200 AV	2"	4"	Valve with 2" male quick disconnect	14.10
	9095A-4000 AV	2"	4"	Valve with 3" male quick disconnect	14.10
	9095A-5200AVEVR	2"	4"	Valve with 2" dry disconnect adaptor	21.25
Remote Fill	9095A-0300 AV	3"	6"	Valve with 3" male quick disconnect*	29.0
	9095A-3200 AV	2"	4"	Valve with 2" female threaded adaptor	14.10
	9095A-3200AVEVR	2"	4"	Valve with 2" female threaded adaptor	14.10
	9095A-4200 AV	2"	4"	Valve with 3" female threaded adaptor	14.10
	9095A-4200AVEVR	2"	4"	Valve with 3" female threaded adaptor	21.25
	9095A-3300 AV	3"	6"	Valve with 3" female threaded adaptor	38.0
Valve Only	9095A-3300AVEVR	3"	6"	Valve with 3" female threaded adaptor	38.0
	9095A-9200AVEVR	2"	4"	2" Valve with female threads	14.10
Kits	9095A-9300AVEVR	3"	6"	3" Valve with female threads	21.25
	Kits packaged in one box				
	9095A-KIT91 AV	2"	OPV Kit includes 9095A-0200, 2" x 6' 419 drop tube, and 305C cap		
	9095ATKIT91 AV	2"	OPV Kit same as 9095A-KIT91 AV with test mechanism		

*Consult Price List for BSP options.



9095A (2")
remote fill connection with
mechanical test mechanism

Construction Details

Quick disconnect adaptor...

Anodized aluminum

Female threaded adaptor... Ductile iron (e-coated)

Dry disconnect adaptor...

Anodized aluminum

Body... Anodized aluminum

Plunger and dashpot... Brass

Shaft, linkages, and hardware...

Stainless steel

Lower pipe... Steel (e-coated)

Float... Nitrophyl

Drop tube adaptor... Steel

Certifications & Listings

NFPA 30, 30A, UFC, BOCA, SBCCI/SFC and PEI RP200.

Florida DEP EQ 356. CARB VR-402 (some models).

NOTE

For use on clean product only.
Not suitable for motor oil.

**419 (2")****Construction Details**

Tube... Aluminum
Gaskets... Buna-N

Certifications & Listings

CARB 95-19 (3" and 4" models),
VR-402 (2" and 3" models)

419 Drop Tube



Drop tubes are installed in the riser at the fill connection or attached to the bottom of overfill prevention valves to direct product flow from the fill point to within 6" of the tank bottom.

Features

- Facilitates a submerged fill when properly installed
- Improves flow efficiency
- Reduces the build-up of vapors in the tank
- .062 wall thickness for durability
- Compatible with Morrison 539 diffusers
- Compatible with Morrison 9095A, 9095A-AV, 9095AA, and 9095C series overfill prevention valves

Item Number	Size	Weight (lbs)	CARB
419--0600 1T	2" x 4'	1.75	No
419--0700 1T	2" x 6'	2.50	No
419--0100 1T	2" x 12'	5.0	No
419--0200 1T	3" x 10'	6.60	No
419--1400 1T	3" x 12'	9.0	No
419--0900 1T	4" x 5'	6.0	No
419--0800 1T	4" x 7'	7.50	No
419--0300 1T	4" x 10'	9.0	No
419--0400 1T	4" x 12'	12.0	No
419--0500 1T	4" x 15'	10.50	No
419--1000 1T	4" x 4'	5.50	No
419--02041TEVR	2" x 4'	1.75	Yes
419--02061TEVR	2" x 6'	2.50	Yes
419--02121EVR	2" x 12'	5.0	Yes
419--03101TEVR	3" x 10'	6.60	Yes
419--03121TEVR	3" x 12'	9.0	Yes

**419A (2")
anodized****Construction Details**

Tube... Anodized aluminum
Gaskets... Buna-N

Certifications & Listings

CARB VR-402

419A Anodized Drop Tube



Drop tubes are installed in the riser at the fill connection or attached to the bottom of overfill prevention valves to direct product flow from the fill point to within 6" of the tank bottom.

Features

- Facilitates a submerged fill when properly installed
- Anodized for greater fuel compatibility
- Improves flow efficiency
- Reduces the build-up of vapors in the tank
- .062 wall thickness for durability
- Compatible with Morrison 539 diffusers
- Compatible with Morrison 9095A, 9095A-AV, 9095AA, and 9095C series overfill prevention valves

Item Number	Size	Weight (lbs)	CARB
419A--0500 1TA	4" x 15'	10.50	No
419A--02041TEVR	2" x 4'	1.75	Yes
419A--02061TEVR	2" x 6'	2.50	Yes
419A--02121TEVR	2" x 12'	5.0	Yes
419A--03101TEVR	3" x 10'	6.60	Yes
419A--03121TEVR	3" x 12'	9.0	Yes



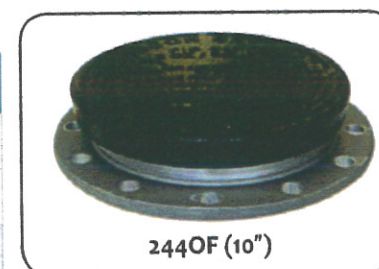
Size	Item Number	Pressure Setting (oz./in ²)	Weight (lbs)	Venting Capacity (CFH) (@ 2.5 PSI)	Mounting Connection
4"	244O--0100 AV	8.0	10.00	131,700	Female NPT
	244O--0170 AV	16.0	18.00	103,799	Female NPT
	244O--0170AVEVR				
5"	244O--0800 AV	8.0	14.00	184,651	Female NPT
	244O--0900 AV	16.0	27.00	184,651	Female NPT
	244O--0900AVEVR				
6"	244O--0200 AV	8.0	19.00	278,660	Female NPT
	244O--0200AVEVR	16.0	36.00	278,660	Female NPT
	244O--0400 AV				
8"	244O--0400AVEVR	8.0	33.00	504,818	Female NPT
	244O--0600 AV				
	244O--0600AVEVR				
	244O--0700 AV	16.0	62.00	504,818	Female NPT
	244O--0700AVEVR				

*Consult Price List for BSP, screen, and iron body options.



Size	Item Number	Pressure Setting (oz./in ²)	Weight (lbs)	Venting Capacity (CFH) (@ 2.5 PSI)	Mounting Connection
4"	244OF-0600 AV	8.0	11.00	131,700	Flanged
	244OF-0600 AVE	16.0	20.00	103,799	Flanged
	244OF-0170 AV				
	244OF-0170AVEVR				
6"	244OF-0050 AV	8.0	21.00	278,660	Flanged
	244OF-0050AVEVR	16.0	38.00	278,660	Flanged
	244OF-0075 AV				
	244OF-0075AVEVR				
8"	244OF-0100 AV	8.0	33.00	504,818	Flanged
	244OF-0100AVEVR	16.0	67.00	504,818	Flanged
	244OF-0200 AV				
	244OF-0200AVEVR				
10"	244OF-0300 AV	2.5	25.00	881,670	Flanged
	244OF-0400 AV	8.0	57.00	881,670	Flanged
	244OF-0400AVEVR				
	244OF-0500 AV				
	244OF-0500AVEVR	16.0	103.00	881,670	Flanged

*Consult Price List for BSP, screen, and iron body options.



Construction Details

3", 4", 5", 6", 8", 10" Vents

Body... Aluminum

Cover... Power coated cast iron

O-Ring... Viton® A, standard models

O-Ring... Viton® B, Model numbers ending in AVE or AVEVR

Screen... 3 mesh stainless steel (3", 4", 5" & 6") (optional)

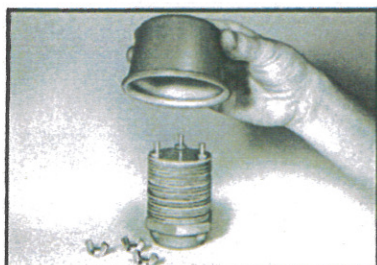
Certifications & Listings

When properly sized for the tank, this vent will conform to the requirements of NFPA 30, 30A, UL 142, ULC S601, API 2000, IFC and PEI RP200. California Air Resources Board Phase I AST EVR.

WARNINGS: The 244 emergency vent is for "emergency pressure relief only" and must be used in conjunction with a "normal vent" or pressure vacuum vent such as a Morrison Fig. 354, 548, 748, 749 or 922. The 244 emergency vent must be properly sized and selected for each specific tank application in order to meet the proper "venting capacity" requirements. See the Morrison Vent Guide for further instructions.

WARNING: DO NOT FILL OR UNLOAD FUEL FROM A STORAGE TANK UNLESS IT IS CERTAIN THAT THE TANK VENTS WILL OPERATE PROPERLY. Morrison tank vents are designed only for use on shop fabricated atmospheric tanks which have been built and tested in accordance with UL 142, NFPA 30 & 30A, and API 650 and in accordance with all applicable local, state and federal laws. In normal operation, dust and debris can accumulate in vent openings and block air passages. Certain atmospheric conditions such as a sudden drop in temperature, below freezing temperatures, and freezing rain can cause moisture to enter the vent and freeze which can restrict internal movement of vent mechanisms and block air passages. All storage tank vent air passages must be completely free of restriction and all vent mechanisms must have free movement in order to insure proper operation. Any restriction of airflow can cause excessive pressure or vacuum to build up in the storage tank, which can result in structural damage to the tank, fuel spillage, property damage, fire, injury, and death. Monthly inspection, and immediate inspection during freezing conditions, by someone familiar with the proper operation of storage tank vents, is required to insure venting devices are functioning properly before filling or unloading a tank. Normal vents such as pressure vacuum and updraft vents for aboveground storage tanks should be sized according to NFPA 30 (2008) 21.4.3

Flame Arrester



Mushroom Vent with Circular Plate-Type Flame Arrester

OBJECTIVE

Protectoseal Series No. 670/6670 Flame Arresters are installed where it is not necessary to conserve vapor losses but where low flash point solvents must be protected against fire and explosion from exterior sources of ignition. In this type of installation, the Protectoseal flame arrester is an integral part of the vent housing. The Series No. 670/6670 Flame Arresters are generally installed under conditions of moderate atmospheric exposures or limitations of space for installation.

TECHNIQUE

The Flame Arrester is mounted on the end of a vent pipe from the tank. Vapors are allowed to escape into the atmosphere and air can be drawn into the tank through the specially designed flame arrester grid assembly. If a possible ignition source outside the tank is encountered, the flame arrester provides protection for the tank contents.

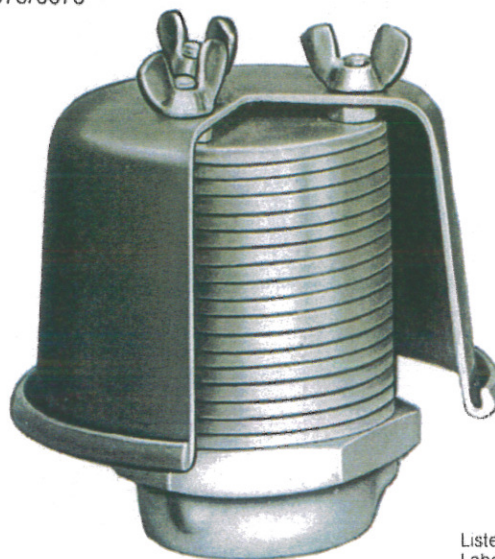
CONSTRUCTION

Construction consists of a series of sturdy, round discs mounted on a durable collar casting:

Standard: Lightweight cast Aluminum collar, weatherhood and flame arrester plates.

Custom: Stainless Steel and other special metals or coatings to withstand the corrosive action of some vapors and atmospheric conditions are available on request.

SERIES NO. 670/6670



Listed by Underwriters' Laboratories in 1" size, Catalog No. 671, and 2" size, Catalog No. 6672.

SPECIAL FEATURES

Easy Inspection, Installation and Maintenance. Design and light weight of unit permit easy, convenient handling for inspection, installation and maintenance. The weatherhood is readily removable by loosening just a few extra large wing nuts.

UL Listed. Listed by Underwriters' Laboratories in 1-inch size, Catalog No. 671, and 2-inch size, Catalog No. 6672, in both Aluminum and Stainless Steel.

Positive Flame Arresting. Precision embossings on alternate plates provide correct air-spacing for flame arresting function. Plates are sturdily fabricated

from 1/16" to 3/32" heavy gauge metal depending on material of construction to resist distortion and bending during cleaning, assuring correct reassembly to original factory standards.

Numerous Sizes Available. 1-inch, 2-inch, 3-inch and 4-inch vents have standard N.P.T. threaded connections. Adapter flanges available in these sizes. Select the correct size vent necessary to relieve tank structure from pressure build-ups and provide adequate relief. Use chart on reverse side for ordering.

Quality Assurance. Each unit is factory inspected prior to shipment to meet Protectoseal's high standards.

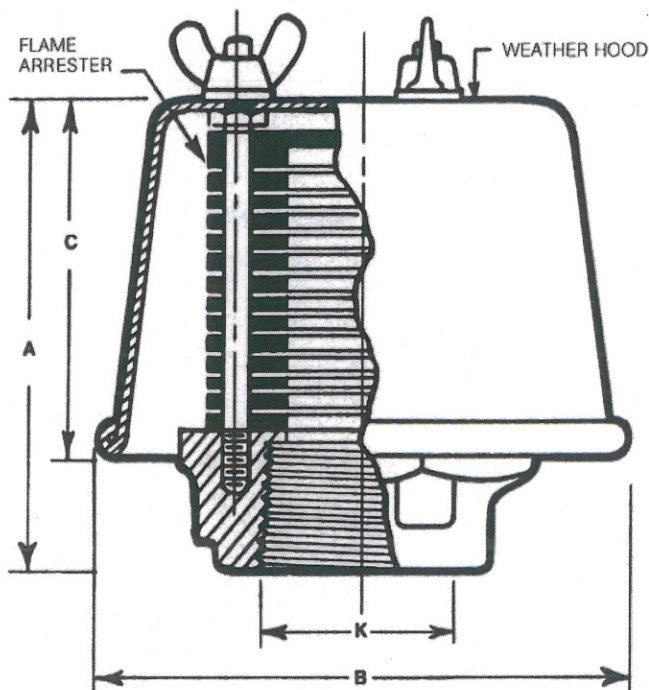
MATERIALS OF CONSTRUCTION

Series	Hood	Flame Arrester Grid Assembly
670	Aluminum	Aluminum 356
6670	Aluminum	Aluminum 356
F670	316 Stainless Steel	316 Stainless Steel
FF6670	316 Stainless Steel	316 Stainless Steel

SPECIFICATIONS

Series No. 670/6670 Flame Arrester

SIDE VIEW



SERIES NO. 670/6670

DIMENSIONS

Cat. No.	K Pipe Size	Standard Construction		
		A Ht.	B Width	C Length
For Aluminum Weatherhood and Flame Arrester				
*671	1"	27⁄8"	33⁄8"	23⁄16"
**6672	2"	45⁄8"	61⁄8"	4"
*673B	3"	73⁄8"	71⁄2"	69⁄16"
674	4"	63⁄4"	81⁄2"	51⁄2"

*Add prefix "F" for all Stainless Steel construction.

**Add prefix "FF" for all Stainless Steel construction.

Check with Sales Department for availability and scheduled delivery.



THE PROTECTOSEAL COMPANY

ISO 9001 CERTIFIED

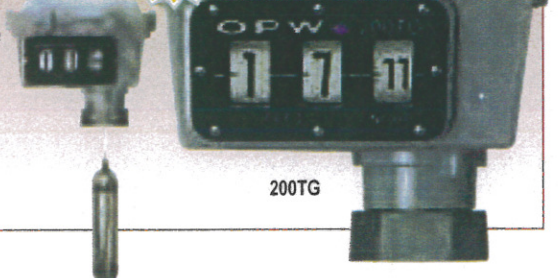
225 Foster Ave., Bensenville, IL 60106-1690
Ph: 1-630-595-0600 Fax: 1-630-595-9059

SAFETY WITHOUT COMPROMISE



Materials

Enclosure: Powder-coated aluminum
Swivel Base: Hard-coat aluminum
Float: 304 stainless steel
Lenses: Tempered borosilicate
Gears: Acetal
Gaskets & O-Rings: Nitrile®
All Hardware: Stainless steel
Accuracy: + or - 2"



Features

- ◆ **Vapor-Tight** – allows for standard tank pressure testing and sealing up to 25-psig (1.72 bar).
- ◆ **Angled Face** – improves visibility from ground on large diameter tanks. May be read easily up to 30 feet away (9.14 m).
- ◆ **Swivel Adaptor Base** – allows for 360° of rotation of gauge face for easy viewing wherever needed.
- ◆ **Easy Installation** – 2" NPT-threaded base reduces labor time, and comes standard with female thread. A H11421RS may be purchased for male threaded applications.
- ◆ **Corrosion-Resistant Construction** – powder-coated die cast-aluminum body assures for long service life in many fluids.
- ◆ **Drop Tube** – prevents float entanglement in the tank, and gives the gauge a more accurate reading when turbulence is present (Drop Tubes sold separately. They are recommended for use in tanks with high turbulence, and where other piping and structures inside the tank may cause entanglement).
- ◆ **Float Buoyancy** – designed to float in all approved fuels with a specific gravity of 0.65 and greater.
- ◆ **Tank Height** – unit designed for use on any horizontal or vertical aboveground tank up to 18 feet (5.5 m) in depth. Specials available upon request.
- ◆ **Numbering** – black letters on white background for ultimate contrast and better visibility. Characters stand over 1" (25 mm) tall.
- ◆ **Unit Measurement** – Can be purchased in metric units to read in meters, 1/10, 1/100, or in English units to read in feet and inches.
- ◆ **Maintenance** – No annual maintenance required.
- ◆ **U.S. Patent No.:** 6,523,404 - Other patents pending.
- ◆ **Compatible Fuels**– see chart on page 303.
- ◆ **Temperature Rating** – 120°F to -40°F (49°C to -40°C)

(Ancillary Equipment)

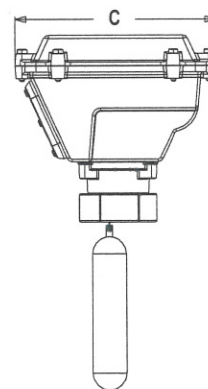
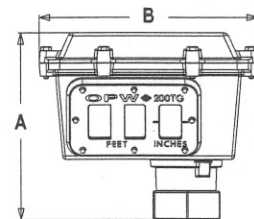
Product #	Description	lb.	kg
H11421RS	2" NPT Male x Male Nipple	1.5	0.68
CARB CERTIFIED AST EQUIPMENT			
61T-0208	2" Dia. x 8' Long Drop Tube	2.67	1.21
61T-0212	2" Dia. x 12' Long Drop Tube	4.00	1.81
61T-0216	2" Dia. x 16' Long Drop Tube	5.33	2.42

Ordering Specifications:

Product #	Description	lb.	kg
200TG-ENG	English Unit Tank Gauge up to 18 ft.	7.75	3.52
200TG-ENG40	English Unit Tank Gauge - 40 ft.	7.75	3.52
200TG-MET	Metric Unit Tank Gauge up to 6 m	7.75	3.52
200TG-MET40	Metric Unit Tank Gauge - 10 m	7.75	3.52

OPW 200TG AST Mechanical Tank Gauge

The OPW 200TG Tank Gauge is designed for reading liquid levels in horizontal or vertical above ground storage tanks. The 200TG Tank Gauge provides an accurate numerical counter readout, eliminating the need for any on-site manual gauging.



Dimensions:

	in.	cm
A	8 1/4	21
B	10 1/4	26
C	9	22.75
D	6 1/4	17.25
E	1 1/2	3.75

Replacement Parts:

Part #	Description
C05165M	Float
H14358M	Lens
H14909M	Lid Gasket

Listings and Certifications



Underwriters Laboratory Listed UL Listing MH29367. Liquid level gauges which are intended to be used on above ground storage tanks and monitor the level of petroleum-based flammable or combustible fluids.



OPW 444TA AST Four Signal Tank Alarm and OPW 144TA AST Liquid Level Tank Alarm

The OPW AST remote Four Signal Tank Alarm is designed to sense up to four different liquid levels or other signals using just one device.

The OPW 144TA Tank Alarm is designed for liquid level sensing.

Alarm Technical Information:

Hazardous Location Approval: Class I, Groups C & D

Maximum Voltage: 7.2 Volts

Maximum Current: 8 ma. per input (32 ma. total)

Maximum Internal Capacitance: 23 uF

Maximum Internal Inductance: 33 mH

Maximum Ambient Temperature Rating: 60° C

Maximum Surface Temperature Classification: T4 Surface Code

Wiring limitations: 1000 foot maximum between the 144TA/444TA unit and any remote switch for each channel of the alarm. This assumes that maximum capacitance for any input is 60 nanoFarads and that the maximum inductance is 0.2 milliHenry per input (UL-913 A7.3)

Note: This device is designed to work independently and should not be wired in parallel with another device, except as defined in the following instructions.

Requirements for devices wired to the 144TA/444TA:

- Attached wiring and devices must be classed Intrinsically Safe
- No voltage or current source
- Maximum capacitance: 60 nanoFarads (.06 uF) per input
- Maximum inductance: 200 microHenrys (.2 mH) per input

Float Switch Technical Information:

Minimum liquid specific gravity: 0.45. Stem material: Stainless steel. Float Material: Closed Cell Buna-N (UL Approved) for gasoline services. Max Pressure: 150 psi @ 70° F. Thread 1/8" NPT.

***NOTE:** When replacing the battery for the 144TA-0100, open the alarm box and locate the OPW number on the black battery module. If the number reads "C05346" then use the replacement part 15615M. If the number reads "144TA-0100" then use the replacement part 202891.

444TA Dimensions:

	in.	cm
A	5 1/2	12.8
B	5 1/2	12.8
C	4 3/16	10.6

144TA Dimensions:

	in.	cm
A	5 1/2	12.8
B	5 1/2	12.8
C	3	7.6
D	4 3/16	10.6
E	1 15/16	4.9
F	35	88.9
G	1 15/16	4.9
H	1	2.5

Materials

Enclosure: Polybutylene terephthalate

Wire Grommet: Nylon w/ buna seal

Float Switch: Closed cell buna float
& stainless steel rod

Pipe: Stainless steel

Tank Adaptor: Aluminum hardcoat anodized



Features

- ◆ **Up to four alarm signals (444TA)** – can be used for high or low liquid level sensing, interstitial monitoring, and/or other signals in one to 4 separate tanks.
- ◆ **Self-Powered** – lithium battery with a 10-year shelf life for long service life.
- ◆ **Audible Alarm** – sounds a 90-decibel alarm at 4 feet away.
- ◆ **Visual Notifications** – red alarm light will flash during use for notification to the user. Low battery light indicates when battery needs replaced.
- ◆ **Corrosion-Resistant Construction** – petroleum and environmental resistant housing and all stainless steel pipe fitting ensure a long product life.
- ◆ **Product /Alarm Identification Label** – located on top of the alarm for quick and easy identification, allowing you to correspond alarms to signals. Label

444TA

has a protective covering.

- ◆ **Intrinsically Safe** – complies with ANSI/UL 913 for Class 1, Division 1 & 2 for Groups C & D hazardous locations.
- ◆ **Cold Weather Resistant** – all components are safe for temperatures down to -40°F operation (and up to 120° F).
- ◆ **Long Life Lithium Battery** – self-powered by a lithium battery which includes a 10-year shelf life to ensure peace of mind for the owner.
- ◆ **Easy Installation** – requires no calibration and installs easily into a 1" tank bung. **May be assembled remotely or directly on top of tank.**

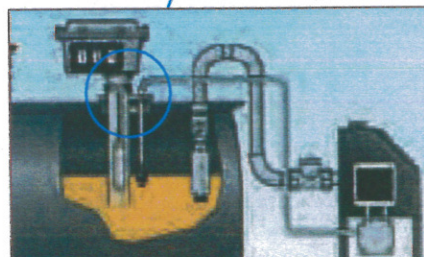


TGTA-0400 4" Tank Bung Combo Fitting
Note: Drop Tube must be used with TGTA-0400.

Ordering Specifications:

Product #	Description	lb.	kg
444TA-0100*	Four Signal Tank Alarm, does not include Float Switch	4	1.8
44TA-LLFS*	36" Liquid-Level Float Switch Sub-Assembly	0	0.0
144TA-0100	Single Channel Liquid Level Tank Alarm, does not include Float Switch	4	1.8
TGTA-0400	4" Tank Bung Gauge and Alarm Combo Fitting (OPW 61T required for use)	10	4.5

The OPW 144TA Requires the OPW 44TA-LLFS, the OPW 44TA-LLFS must be purchased as a separate item.



Replacement Parts:

Part #	Description
44TA-LLFS	Liquid-Level Float Switch ASSY
H15412M	Wire Fitting
H15411M	Float Switch
Items to Convert to a Low Level Alarm:	
202430	1/8" SST Nipple
C05295M	SST Tube
Battery Module	
H15937M	444TA-0100
See Note	144TA-0100*

Approvals and Listings



3069027

Conforms to ANSI / UL STD 913
Certified to CAN / CSA STD C22.2 No. 157-92
Florida EQ-610
CARB Certified

444TA and 144TA Instruction Sheet Order Number: 200655

Vehicle Summary

	Unit	Chassis	
Model:	T800 Series Conventional.	Fr Axle Load (lbs):	20000
Type:	FULL TRUCK	Rr Axle Load (lbs)	52000
Description:	T800 off road fuel truck	G.C.W. (lbs):	72000
	Application	Road Conditions:	
Intended Serv.:	Mining service. Vehicles used to service	Class A (Highway)	20
Commodity:	Liquid petroleum products	Class B (Hwy/Mtn)	10
	Body	Class C (Off-Hwy)	70
Type:	Tank	Class D (Off-Road)	00
Length (ft):	20.0	Maximum Grade:	6
Height (ft):	12.0	Wheelbase (in):	255
Max Laden Weight (lbs):	8000	Fr Axle to BOC (in):	74
		Cab to Axle (in):	181
		Cab to EOF (in):	301
	Trailer		
No. of Trailer Axles:	0		
Type:			
Length (ft):	0.0	Special Req.	
Height (ft):	0.0	U.S. Domestic Registry, 50-State	
Kingpin Inset (in):	0		
Corner Radius (in):	0		
	Restrictions		
Length (ft):	120		
Width (in):	102		
Height (ft):	15.0		

Model	Description
	T800 Series Conventional. Elastomer bushed front spring pins & heavy-duty shock absorber brackets, 16mm. fasteners from rear cab support to end-of-frame, except tractor taper crossmember. Vinyl inside sunvisors, driver side includes strap & mirror, rider side includes strap; Under-dash center console w/ 2 cup holders, 2-12V outlets & a storage compartment, Glove box door with locking latch.
	T800: Sloped or Straight Hood.
	Chassis operation will include stationary application used in Canada or Alaska. Stationary operation is defined as running the engine under load while stationary at a substantial fraction of engine gross horsepower (60% or greater) for an extended period of time (longer than 5 - 10 minutes).
	Dealer/Customer declines engine w/CARB Idle Emissions Reduction Feature.
	Non-Sleeper w/rear axle capacity less than 59K.
	Liquid petroleum products
	Mining service. Vehicles used to service earthmoving & mining equipment. Includes bodies such as mechanic's service bodies, tire hoists, fuel/lube, etc. Typically includes some operation off of paved roads. Road usage: any combination, which includes some Class C.
	Tank

U.S. Domestic Registry, 50-State

Engine & Equipment

ISX15 450 2013 450@1800 1650@1000

w/Intebrate, Diagnostic Plug for data link, Oil Cooler, Aluminum Flywheel Housing. Linehaul Family 1

N09200 N205 120...Standard Maximum Speed Limit [LSL]

N09220 N207 0....Expiration Distance

N09240 P13 120...Hard Maximum Speed Limit

N09260 P14 64...Maximum Accelerator Pedal Vehicle Speed

N09280 P16 0....Accelerator Lower Droop

N09300 P19 64...Maximum Cruise Speed

N09320 P38 0....Cruise Control Lower Droop

N09360 N203 252...Reserve Speed Function Reset Distance

N09380 N202 0....Maximum Cycle Distance

N09400 N206 10...Maximum Active Distance

N09420 N201 0....Reserve Speed Limit Offset

N09440 P11 No...Engine Protection Shutdown

N09460 P06 No...Gear Down Protection

N09480 P26 1400...Max PTO Speed

N09500 P02 Yes...Cruise Control Auto Resume

N09520 P04 Yes...Auto Engine Brake in Cruise

N09540 N209 0....Expiration Distance

N09560 P520 Yes...Enable Idle Shutdown Park Brake Set

N09580 P32 5....Timer Setting

N09600 P233 Yes...Enable Impending Shutdown Warning

N09620 P234 60...Timer For Impending Shutdown Warning

N09640 P516 35...Engine Load Threshold

N09680 P33 No...Idle Shutdown Manual Override

N09720 P230 Yes...Enable Hot Ambient Automatic Override

N09740 P46 40...Low Ambient Temperature Threshold

N09760 P56 60...Intermediate Ambient Temperature Threshold

N09780 P47 80...High Ambient Temperature Threshold

Prospector version 33.0 supersedes previous

version 32.1

Effective VSL Setting NA

Engine Idle Shutdown Timer Disabled

Enable EIST Ambient Temp Override

Use only with MX engines on 4/1/13. Use only with Cummins and MX engine on 10/1/13.

Enable EIST in PTO Mode

Use only with MX and Cummins engines

Eff EIST NA Expiration Miles

Use only with MX and Cummins engines

Air compressor: Cummins 18.7 CFM, Cummins, PACCAR

PX engines.

Air cleaner: Powercore engine mount 10 in.

w/constant torque SS clamps, pop-up air restriction indicator. Holds 10% more fine dust than 2500. Pop-up indicator is standard.

Inside/outside air intake: for Powercore engine

mounted w/cowl inlet.

Filter minder air restriction indicator mounted

on air cleaner replacing standard pop-up indicator.

Fan Hub: Horton 2-Speed for ISX15

Cooling module: T8SH/T8B/W9S 1440 square inches.

On-off fan hub, nylon fan blade, translucent top tank, air-to-air heat exchanger/aftercooler, silicone hoses w/constant torque clamps, long life

coolant. Drain valve is not available w/Allison transmissions.

Radiator winterfront.

Radiator bug screen mounted between hood & grille.

RH under cab DPF/SCR w/ RH SOC vertical tailpipe.

For use w/ daycabs, extended daycabs, or modular sleepers. T660 requires split fender hood

Tailpipe: 5 in. single 30 in. 45 degree curved.

PACCAR Fuel filter/water separator: 12V preheat,
WIF sensor Cummins ISX12/ISX15. 2013+

Kenworth Fuel Cooler

Required for Cummins engines with a single fuel tank. Required for PACCAR MX-13 engine with a single fuel tank and stationary use: High RPM, low vehicle speed, sustained for longer than 1 hour. Optional for all other applications.

Immersion block heater 120V 1500W w/plug under
door on T700, C500, T660, T800 & W900.

Engine oil pan heater 120V 300W w/plug under
door on C500, T660, T700, T800 & W900.

Alternator: PACCAR 130 amp brushless.

Batteries: 4 PACCAR GP31 threaded post (700) 2800
CCA dual purpose.

Starter: PACCAR 12 volt electrical system. W/
centralized power distribution incorporating plug-in style relays. Circuit protection for serviceability, 12-volt light system w/circuit protection circuits number & color coded.

Battery disconnect switches 2, mounted on
battery box.

Jump start terminals under hood.

Transmission & Clutch

Transmission: Fuller RTO16908LL 10-speed
w/pump & oil cooler. Standard with synthetic lubricant. Includes severe-duty pilot bearing on all class 8 models.

Clutch: Eaton 4 paddle ceramic 1650 lb-ft
Eaton 15-1/2 in. Easy Pedal Advantage Manual Adjust Clutch cover. Torque limiting clutch brake. Severe duty pilot bearing. Synthetic lubrication for Eaton Fuller & axles. Extended grease fitting.

Grease bank for clutch & cross shaft.

Driveline: 2 SPL250XL 1 centerbearing
requires 3500057 interaxle driveline. Low maintenance offering from Spicer. On-highway 350K mi first service interval, 100K mi subsequent service interval on U-joint, splines lubed for life for life, quick disconnect end caps.

Chassis will be fitted w/LH transmission PTO.
(PREVENTS ECU F/INTERFERING W/PTO ONLY)

14 in. Eaton Fuller high capacity oil to water
cooler standard for transmission 1550-2250 lb-ft, 18-speed AutoShift.

Front Axle & Equipment

Meritor FL941 Front Axle rated 20K
standard track.

Front Brake: 22,000 lbs. Bendix ES S-cam
16-1/2x6 in.

Front dustshield: for drum brakes:

all front axles.

Front Brake Drum: 22,000 lbs. 16-1/2x6 in. Cast.

Front Hubs Iron hub pilot 22,000 lbs. 10 Bolt

16.5x6in. or 7in. or air disc brakes. 10 Bolt, 11-1/4 in. bolt circle. Consider Wheelguards (5850002) with aluminum wheels.

Front low maintenance hub package 14,601 to 22K

Dana Spicer. Includes adjustment free half tolerance bearings.

Hubcap: front vented.

Front Auto Slack Adjuster.

Front Springs: Taperleaf 20K w/ shock absorbers

w/ maintenance-free elastomer spring pin bushings. Standard with rubber pins except for C500 which has threaded pins. W900S only. Not available on W900L. W900B use 2866021.

Dual power steering gears: 20K Sheppard M100P.

Power Steering Cooler: Radiator mounted air to

oil 2007+ engines only. 2899362 is optional w/ 2006 or 2007 engines.

Threaded Bushings for taperleaf spring

16K, 18/20K, 22K, 40K replacing rubber.

Rear Axle & Equipment

Dual Dana Spicer D52-190P rear axle rated at

52K. w/ 16mm housing and 2.25in. shaft diameter. Includes pump. Tandem rear axles.

Rear Axle Ratio - 4.78.

Dual Rear Brakes 16-1/2x7 in. to 46,001 -52K

Bendix ES-extended service S-cam.

Dual rear heavy duty Brake Drums: cast.

Use HD Gunitite Drum when tandem axle with GAWR over 46,000 lbs is selected.

Dual Rear Hubs: Iron hub pilot 11-1/4 in. BC.

Dual rear low maintenance hub package Dana

Spicer. Includes adjustment free half tolerance bearings, extended life oil seals, and a precision bearing spacer. Maximum axle capacity is 52,000 lbs.

Dual Rear axle automatic slack adjusters.

Spring Brake: 3030 long stroke dual w/ Life seals.

Dustshields for drum brakes: all rear axles.

Bendix 4S/4M anti-lock brake system.

Current generation ECU is Bendix ABS 6.

Interaxle driveline 1 SPL170XL.

Wheel Differential Lock for Dana Spicer axles

D52-190P, D46-590HP or D52-590P forward rear axle & rear rear axle.

Raised oil levels for rear rear axle for use on

12% or greater continuous grades.

Rear suspension: Tandem Neway ADZ252 52K.

60 in. axle spacing. Air suspension w/ 12 in. ride height & single leveling valve. Includes air suspension dump valve.

Tires & Wheels

Front tires: Bridgestone M854 425/65R22.5 20PR.

44.8 in. diameter, all position. On/Off highway. Wide-base tire. Curb protector bar 20.7 in. SLR.

Rear tires: Bridgestone M775 11R24.5 16PR.

44.6 in. diameter, drive. 20.8 in. SLR. Code is priced per pair of tires.

Tires selected limit top vehicle speed delivery

requirements may apply see TE-1127/1045. Speed restricted tires.

Rear Tire Quantity: 8

Front wheel: Accuride 29806PW 22.5x12.25 steel

painted white, hub pilot mount. 11500lb. maximum rating. Previously 28803PW. 5-hand holes.

Rear wheel: Accuride 28827RPW 24.5x8.25 steel

white e-coat, hub pilot mount. 8000 lb. maximum rating. 2-hand hole. Code is priced per pair of wheels.

Wheels selected limit top vehicle speed.

Wheels are speed restricted, special delivery requirements may apply.

Rear Wheel/Rim Quantity: 8

Frame & Equipment

Frame Rails: 11-5/8 x 3-7/8 x 3/8 in. Steel to

447 in. Truck frame weight is 3.80 lb.-in. per pair of rails. Section modulus is 21.43, RBM is 2,572,000 in.-lbs per rail. Frame rail availability may be restricted based upon application, axle/suspension capacity, fifth wheel setting, or component/dimensional specifications. The results of the engineering review may result in a change to the requested frame rail. If a change is required Kenworth Application Engineering will advise the dealer of the appropriate material specification for a substitute rail.

Full Steel Insert: for 11-5/8 in. steel rail to

480 in. Adds 2,132,000 in.-lb to main rail RBM. 120K PSI. 11-5/8 in. primary insert RBM 4,704,000 in.-lbs, section modulus is 39.20. Full frame insert length is equal to wheelbase plus rear frame cutoff plus dimension forward of front axle by model: T700, T660 and T800 = 21.26 in., C500B = bumper setting minus 0.79 in., W900B = 5.27 in., W900L = 1.50 in., W900S = 3.27 in., T440/T470 50 in. bumper setting = 21.26 in., T470 73 in. bumper setting = 72.3 in.

Bumper: Heavy-duty straight steel box. Painted.

Bumper will be painted frame color unless a paint option is chosen from the Bumper Paint Section. Requires a bumper setting code.

51.5 in. Bumper setting. Requires a bumper code.

Front tow hook: Center mounted, cast.

Requires iron front drive brackets.

Front mudflaps.

Huck bolts throughout frame, where possible.

Short length steel parallel battery box module

under cab, aluminum integral step, diamond plate cover. Up to 2 air tanks may mount to bottom of box. Batteries will be oriented perpendicular on rail.

Battery box location: LH Side.

T470,C500,T660,T800 non-polished DPF/SCR cover:

diamond plate w/step for use w/2010 style exhaust. For T800- use extended length non-polished battery box on opposite rail to match the length of under cab components.

Invert rear intermediate crossmember. A separate

sales code is required for one of the following: an additional crossmember; steel crossmember; and if crossmember is not standard aluminum gussets on non-severe service.

Heavy-duty BOC crossmember assembly.

Speed limited tires: Less than 65MPH. Dealer to

review delivery options w/transporter.

Width across rear tires exceeds 102 in. due

to combination of wide track rear axles & dual tires. Dealer to review

delivery constraints w/transporter.

Component Restriction: Do Not Drive - Lowboy
Delivery only.

Customer-installed bulkhead and/or headache
rack.

Two rams horn open rear tow hooks, not for
trailer towing.

Rear mudflap arms: Betts B-25 standard-duty,
straight. Includes B1732 mounting brackets as standard.

Rear mudflap shields: White plastic antisail w/
Kenworth logo.

Square end-of-frame w/ crossmember; non-towing.

Fuel Tanks & Equip

Fuel Tank: 150 US gallon 24.5in. aluminum BOC
replace. Class 8 fuel tanks w/ o locking caps include an anti-siphon device
on the filler neck. A third tank support is required with this tank unless
heavy-duty 7 in. wide supports are specified.

Medium round DEF tank. 20.7 gallons
of useable volume. The DEF tank will be located on the side you specified,
but will not be displayed in the Prospector graphic. If you have specific
configuration or body builder concerns, please utilize the Custom Frame
Layout option. Required capacity is calculated by fuel capacity of the
vehicle and will accommodate two diesel re-fillings for every DEF re-filling.

Insulated fuel draw lines.

Fuel tank locking cap(s). Not available w/
hydraulic tank. Tank lock does not match ignition/cab/sleeper locks.

DEF tank location is on the LH.

Location: 150 gal fuel tank LH behind cab

Cab & Equipment

Cab: Curved Glass Conventional.

Cab Includes aluminum & fiberglass fully hucked cab w/ all aluminum
bulkhead doors & continuous stainless steel piano-style door hinges.
Single electric horn standard. Incandescent exterior lights include
diagnosable bulb detection and warning. Trailer cable on tractors includes
integrity detection. Standard features include multiplex wiring for interior
lights, automated pre-trip inspection, short and open check diagnostics.
Warning alarm will sound when lights are left on.

Hood: Sloped Metton hood w/ grille & shell use
for T800B 1-piece requires engine mounted air cleaner, 1440 square in.
radiator & 2007+ engines.

Additional 4 ribs on radiator grille.

Cab heater: W/integral defrosters & A/C 45,000
btu cab heater. No sleeper heater/AC. Includes 5 mode rotary control.
T660 include filter media.

One ball valve for primary heater(s). For
chassis w/o auxiliary heater.

Steering wheel: 18 in. 4-spoke.

Adjustable telescoping tilt steering column.

Flip valve: On dash w/indicator light & piping.
Must code for factory installed PTO.

Two spare switches: Wired to power.

Gauge: Dash mounted air filter restriction gauge.

Gauge: Fuel filter restriction gauge.

Gauge: Oil temperature gauge transmission.

The NavPlus unit includes a virtual transmission oil temperature gauge.

KW Driver Information Center: Includes fuel

economy, RPM display, trip information, truck information, diagnostics, gear display, alarm clock.

Instrument package: Includes speedometer,

tachometer, fuel gauge, engine coolant temperature gauge, engine oil pressure, voltmeter. Class 8 also includes primary & secondary air reservoir gauges & an air application gauge. DEF level gauge and warning lamp are included with 2010+ engines. Engine hour meter and outside air temperature readouts are standard. Primary read out will be MPH. Add 8240620 to switch primary scale to KPH in Canada.

Cab interior: Splendor. Includes smooth

upholstered side & back panels w/stitched accent lines, upholstered door pads, full vinyl headliner, black dash panels & black rubber floor mats.

Interior color: Slate Gray w/trim Dark Slate Gray

Driver seat: Kenworth Air cushion Plus HB Mordura

Standard features includes 7 in. fore and aft slide adjustment w/isolator, 6-23 degree recline, air suspension with cover, dual armrests, and single chamber air lumbar support. Seat cushion is 20 inches wide w/ 2-position tilt and 2-position front cushion extension. Seat material has a horizontal stitch pattern and is 2-tone in color. Seat back is carpeted and includes a map pocket. Seat is manufactured by National. Includes inside visor and retractable 3-point matching seat belts. Black seat belts for T700, gray on all other models.

Rider seat: Kenworth Toolbox Plus LB Mordura.

Standard features include fixed base and backrest, tool box seat base w/ door, and dual armrests. Seat cushion is 19.5 inches. Seat material has a horizontal stitch pattern and is 2-tone in color. Seat back is carpeted. Seat is manufactured by National. Includes inside visor and retractable 3-point matching seat belts. Black seat belts for T700, gray on all other models. This seat is recommended when corner windows are specified.

Seat color: Dark Slate Gray.

Air line fitting: At driver seat.

Customer-installed air chuck.

Delete dual rider armrests.

Kenworth Radio with AM/FM/WB/USB and Bluetooth

CB Radio: Cobra 29. Includes weatherband w/header

mounted quick release. Includes transceiver & separate speaker remote-mounted in headliner & dual CB antennas. Includes sound tracker & illuminated panel.

Constant power supply to sound system: For use

w/battery disconnect.

Additional accessory power supply wiring.

In header.

Speakers: Four 4 in. x 6 in. high performance.

Adds 2 speakers to the Panasonic standard 2. Located in cab header & rear cab corners.

Black dash: Replacing trim color dash.

W/Diamond trim the dash top, area by the glovebox & lower dash will be black. The trim around the main dash area, above the glove box, the header spear & trim on the doors will be woodgrain.

Non-self cancelling turn signal: W/column-mounted

headlight dimmer switch & intermittent wiper control.

Electric LH & RH door locks.

Long grabhandle RH side of cab.

Long grabhandle LH side of cab.

Grabhandle LH inside door frame above dash.

Grabhandle RH inside door frame above dash.

DAYLITE DOOR: LH/RH INCL RH PEEPER WINDOW

Single rectangular air horn 26 in. LH top of roof

. Includes air horn cover.

Single convex mirror 8-1/2 in. x 4-7/16 in.

located on rider side, and non-heated.

Dual convex heated mirror 8.5 inch w/ offset

mounting below regular mirror.

Mirror: Dual Moto heated mirrors 7 in. x 16 in.

LH & RH remote controlled. Switch located on door pad.

Mirror brackets 8-1/2 ft load width.

Rear cab stationary window 17 in. x 36 in.

Electric-powered LH & RH door window lifts.

Switch located on door.

Two-piece roped-in windshield, w/ curved glass.

Exterior aerodynamic sunvisor w/ integral marker lights.

2 in. rubber wheelwell fender extension.

Severe service reinforcements for aluminum cab sill.

Link Cabmate suspension.

Quiet cab package: For Non-VIT interiors.

Includes firewall insulation & floor covering w/ sound deadening materials and cowl blanket

Lights & Instruments

Headlamps: Dual Rectangular, extended life halogen

Marker Lights: Five aerodynamic, LED mounted in sunvisor.

Turn Signal Lights: LED, mounted on fender

Customer-installed road/fog lights switch & wiring.

Dual Floodlights: Top-mirror mounted - first set.

Switch & Wiring for Customer-installed Floodlight

: w/o electrical pass-through - 2nd set. Wire coiled BOC/BOS.

Switch & Wiring for Customer-installed Floodlight

: w/o electrical pass-through - 3rd set. Wire coiled BOC/BOS.

Stop/Turn/Taillight: Trucklite 44 Series 6- LED

red w/ two LED backup lights. Grommet mounted. Taillights come on when fog lights are on.

Marker Lights: Interrupter switch.

LH Courtesy Lamp: On upper skirt to light up step.

Marker Lights: Midframe

& reflectors mounted standout. Required on tractors where overall length exceeds 30 feet.

Electric Backup Alarm: Meets SAE J994 & OSHA requirements.

Junction Box: Mounted Behind Cab or Sleeper

Not Mounted at End of Frame.

Circuit Breakers: Replacing fuses. Does not
apply to any 5-amp fuse box position. Breakers include stop/brake/turn,
tail lamp, high & low beams, marker/clearance lamps, horn, fuel heat,
gauges, wipers, air dryer, HVAC controls, panel lamps.

Air Equipment

Air Dryer: Bendix AD-IS Extended Purge heated.

Moisture ejection valve w/ pull cable drain.

Nylon air tubing in frame & cab, excluding hoses
subject to excessive heat or flexing.

Air tanks: mounted inside frame flanges
where possible.

Extended Warranty

Severe Service Warranty.

Heavy-duty Emissions Surcharge \$9250.

Miscellaneous

Specify Ship Destination by Narrative.

Domestic severe service package.

Domestic severe service is required on any chassis operating within the 50
United States and Canada where the application includes class C road
service 10% or more of the operation, or when vehicle will operate
predominately on privately maintained, unimproved, or roughly prepared
road surfaces. Specific vocations include, but are not limited to, oilfield
service and Canadian logging service.

Additional lead time required for off highway &
/or specialty component truck.

Triangle reflector kit. Kit consists of 3
triangles in plastic carrying case.

Paint

Paint color number.

N97020 A - L0006EB WHITE B/C
N97400 SUNVISOR L0006EB WHITE B/C
N97200 FRAME N0001EA BLACK

Imron solid 1 color non-sleeper Spec A.

Will be White L0006EB if no other color specified.

Base coat/clear coat.

The Kenworth Color Selector contains additional instructions, as well as
information on Kenworth paint guidelines and surface finish applications.
Kenworth is standard with Dupont Imron Elite paint.

Total Weight

21523

TANK FITTINGS

Vapor Recovery:	4" aluminum external line down rear head to rear of curbside discharge area. End vapor line with 4" vapor adapter and orange cap. NO Vapor Tee. Run air and electrical lines to top of tank through conduit attached to vapor line.
Internal Valves:	(1) Betts 4" air operated internal with 160 degree fusible plug and a streetside front mounted remote release.
Operator:	(1) flipper switch to act as a "master" opening the air vents and activating the operator panel and gauge and (1) flipper switch to activate the internal valves, with all switches mounted in an operator cabinet. 3/8" minimum air fittings throughout use nut & ferrule fittings.

DISCHARGE

Piping:	4" schedule 10 aluminum, belled fittings and victaulic couplers. 4" curbside discharge at rear of truck. Install rubber cushion at piping U-bolts
Discharge Fittings:	4" detent butterfly valve and 22 1/2 degree tilted 4" female coupler and plug.
Sight Glass:	None
Sight Glass:	4" Bayco Cast Aluminum Encased Acrylic Sight Glass Comments: Upstream of butterfly valve
Pump System:	None
Suction Line:	None

LOADING FITTINGS

Bottom Load:	(1) Bayco 4" bottom loading API valve on Y-branch with Bayco dust cap.
Deflector:	(1) Aluminum Splash Deflector Over Internal Valve
Brake Interlock:	(2) Bayco HD brake interlock valves: (1) on the bottom loading head and (1) on the curbside vapor recovery outlet.
Overfill Cabinet:	22L X 22H X 7D Aluminum Box With T-Handle Lock, Overlapping Side Hinged Door and Gas Shock.
Overfill Control Module:	Bayco Flo-Tech R/OM type system with control module. Comments: Module mounted in the operator cabinet
Overfill Probes:	(1) In Dome Cover
Overfill Optic Socket:	Optic Socket Comments: Mounted Ahead Of The Curbside Discharge
Ground Hoq Bolt:	Included

Quote: Q09860.00

LOADING FITTINGS

TRIM

Catwalk:	Non-Skid Tape Between Dome Rails
Ladder:	Aluminum At Rear With Non-Slip Steps Gripstrut type platform at the base of the ladder Comments: Do not run air or electrical lines through ladder rails
Catwalk Drains:	Through Ladder Uprights
Level Indicators:	None
Fenders:	(2) smooth aluminum reinforced full tandem double radius with Beall logo mudflaps. Comments: 56" spread drive tandem 49.4" tire diameter (Michelin XDL 12R24 18-ply rating) Outside of tires may exceed 102" wide
Hose Tubes:	(2) 7" X full length polished aluminum tube. Comments: Open rear (1) each side
Down Spout Box:	None
Cross Tube:	None
Stick Tube:	None
Tool Box:	Aluminum 36L X 24H X 24D frame mounted with T-handle lock, overlapping bottom hinged door and cable lanyard. Comments: Install curbside, forward of tandem.
Product Tags:	None
Placards:	(4) Placard brackets only for decals Comments: Install One (1) On Each Side Near Rear Bolster, One (1) On Streetside At Rear, One (1) On Backing On Center Of Front Bumper.
Permit Holder:	Betts MPH-1 Comments: mounted in tool box
Static Studs:	None
Chain Hooks:	(2) Protec Chain Hanger Mounted To The Truck Frame. Comments: Mount one each side
Cone / Bucket Holder:	None
Chock Blocks:	Aluminum chock block holder with rubber chock blocks.

Quote: Q09860.00

TRIM

Comments: Mounted to toolbox

Fire Extinguisher: None

Cleanouts: None

Hitch: None

Bumper: **Steel D.O.T. bumper
No hitch or safety coupler required**

Comments: **Truck frame will have a tow hook on the outside of each frame rail at the rear, KW installed.**

ELECTRICAL SYSTEM

Tail Lights: **(3) Trucklite LED Per Side In Buffed Aluminum Light Housings: Outside - Red Clearance/Stop, Center - Amber Turn only, Inside - Red Tail/Stop**

Mount off the tank below hose tube

Backup Light: **(1) Trucklite L.E.D. clear back-up light per side.**

Comments: **Install in the tail light light housing.**

Center Stop Light: None

Marker Light: **(3) Trucklite LED Single Function Grommet Mount Per Side**

Comments: **Mounted On The Shell**

Midship Turn Light: None

ICC Identification Light: **(1) Trucklite LED Recessed 3-Light I.D. Cluster In Rear Dam Plate To Include Stop Light Function**

License Light: License Plate Bracket And Trucklite Light, Streetside Rear

Backup Alarm: None

Work Light: None

Work Light: **(4) Betts LED Stud Mount Worklight(s)**

Comments: **(1) rear dome rail each side pointing down and out
(2) rear end dam pointing down and out**

Multiple cab switches

Work Light: **Wire Worklight(s) To An Existing Switch In The Cab**

FINISH

Paint: Steel Parts Primed And Painted Black Polyurethane

Conspicuity: **2" wide reflective tape. Red/White alternating 100% coverage. Includes tape across the D.O.T. bumper and white only sectioned around the upper perimeter of the rear head.**

Quote: Q09860.00

FINISH

Comments: Install on the hose tubes

- Signs: Standard Beall Emblem And Caution Decal Package
- Calibration: Water Calibrated With Charts In 1/4" Increments
- Chevron Exhibit "C" Included

Liquid Level Sensor for Tank Truck Overfill Prevention

**ELECTRONIC
PRODUCT
LINE**



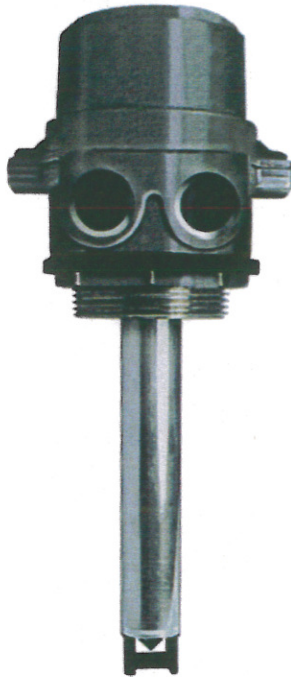
Featuring Dynacheck® – Automatic and Continuous Self-Checking Circuitry

DESCRIPTION

Scully two-wire optic sensors are purpose-built for liquid petroleum product overfill prevention and point level detection.

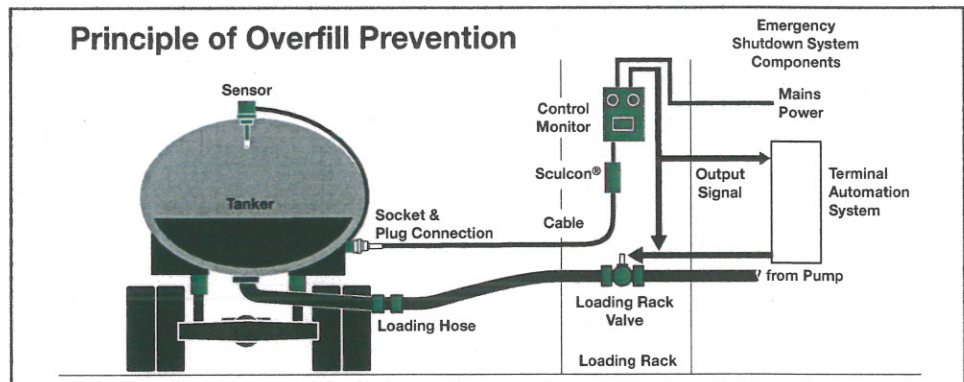
They are designed to be used with the Scully Intellitrol® and ST-15 series loading rack control monitors. The sensors can also be used with the Scully IntelliCheck® II Monitor. There is no waiting for the control monitors' permit light to go on because the sensor requires no warm up time. Overfill prevention applications include road tankers, rail cars and storage tanks.

The two-wire optic sensor is a critical component in Scully's unique and patented Dynacheck circuit design. When used in conjunction with Scully electronic monitoring equipment, our overfill protection sensor will provide consistent failsafe monitoring. By constantly checking a "closed loop" pulsing signal across the entire system, Scully ensures a safe and reliable loading operation. If rising fuel contacts the sensor, this signal is interrupted and the controlling pumps and valves are shutdown. No operator involvement is needed to end the loading operation.



2-Wire Sensor

The ScuL-Sense™ design is API compliant and withstands temperature related stresses, dramatically improving reliability across a wide operating range.



IEC 61508 SIL 3 Capable

 $\lambda_{DU}=2.0 \text{ FIT}^*$ $\lambda_{SU}=110 \text{ FIT}^*$

*FIT = Failure In Time (1×10^9 failures per hour)

FEATURES AND BENEFITS

- Maximum safety with Dynacheck—Automatic and continuous self-checking circuitry when used with Scully electronic rack and vehicle onboard monitoring systems.
- Scully's field-proven electro-optics technology.
- Wide Temperature Range.
- Adjustable Sensing Level.
- Instant-On™—Instant permissive signal. No warmup time required.
- Quick purging of liquid—"fast" repermit as product level drops below the sensing point.
- Fully compatible with all Scully thermistor controllers.
- FM and CSA approvals for Class I, Division 1, Groups C and D hazardous locations.
- Meets requirements of API Recommended Practice RP-1004.

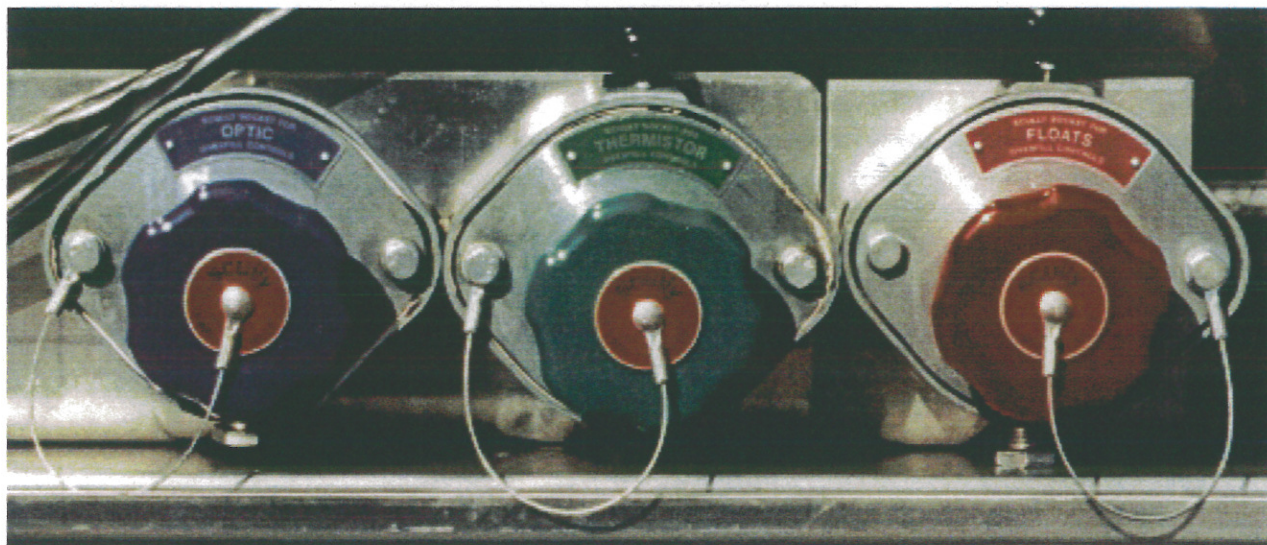


60715 Rev F

Scully Signal Company / Tel. 617 692 8600 / Fax. 617 692 8620 / 800 2 SCULLY (272 8559)
70 Industrial Way, Wilmington, MA 01887-3479, USA / sales@scully.com / www.scully.com

Scully Sockets

Truck Mounted Overfill Prevention System Connectors



Optic, Thermistor and Float Style Sockets

Scully sockets offer the widest range of truck to rack system compatibility in the petrochemical transport industry. They are designed for use with Scully Optic, Thermistor, Instant-On™, Load-Anywhere® and IntelliCheck® Overfill Prevention Systems.

These sockets are the vehicle mounted electrical connector of Scully Tank Truck Overfill Prevention Systems. They provide a simple, durable connection by way of the mating plug mounted on the loading rack.

Scully Sockets offer all these advantages:

- Designs which meet API (American Petroleum Institute) standards for optic and thermistor systems.
- Used in conjunction with Scully loading rack overfill prevention controls - the #1 choice of bottom loading terminals in the United States.
- Different socket styles for complete compatibility with all loading rack plug styles.
- Easy gripping vinyl protective cap is included.
- Internal mounting holes for easy installation with plenty of room for probe wiring connections.
- Two 1/2" NPT threaded conduit entry holes for installation flexibility.
- Scully style sockets feature stainless steel contact pins. All other sockets feature plated brass pins.
- Color coded labels for easy identification.
- Durable construction to withstand the rigors of road travel.

Setting New Standards In Safety

C-SERIES

3CE1BGZG1

MAIN SPECIFICATIONS

Type	3 CYLINDER, 4 CYCLE, WATER COOLED, OHV, DIRECT INJECTED, NATURALLY ASPIRATED
Bore Stroke	88 MM X 90 MM
Engine Displacement	1.6 L
Compression Ratio	20.0;1
Dry Weight	158 KG (348 LBS)
Dimensions - L x W x H	619 MM X 528 MM X 682 MM
Coolant Capacity (Block)	2.0 L
Lube Oil Capacity	6.7 L

MAIN FEATURES

Alternator A.C.
Voltage Regulator
Starter
Flywheel Housing
Flywheel
Oil Pan
Fan (7 Blade)

STANDARDS

40 A
12 V GENSET
1.4 KW
SAE #5
SAE 7.5
6.7 L
BLOWER

INDUSTRIAL RATING

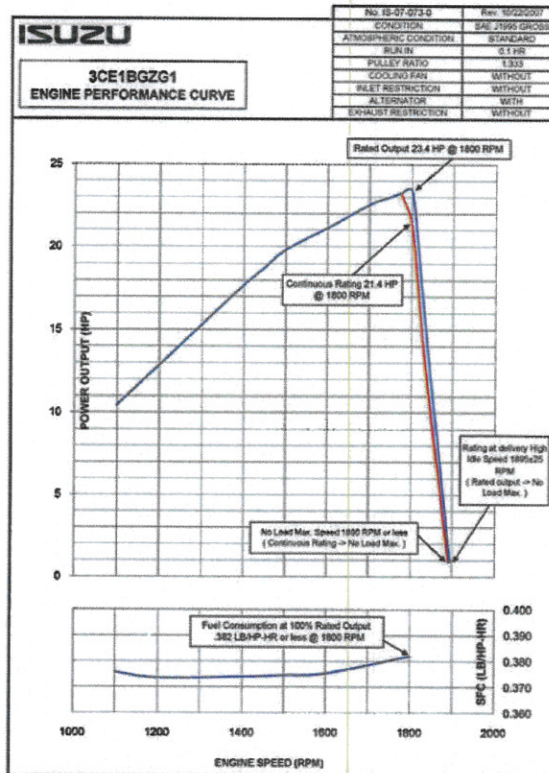
Rated Output 1800 RPM

Specifications subject to change without notice.

EMISSIONS

- U.S. EPA Tier 4 Interim
- EC Stage IIIa

POWER CURVE





PETROLEUM 300

3" X 2-1/2" End Suction Centrifugal Pump

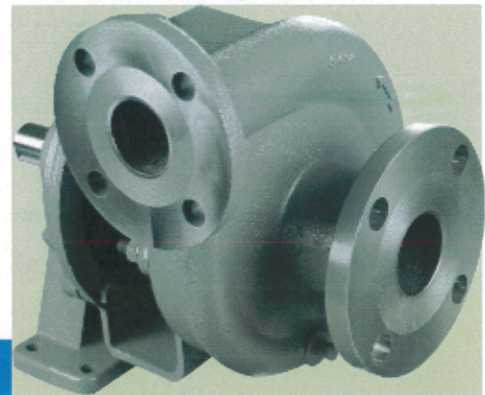
Specifically designed for petroleum based fluids, MP's Petroleum 300 series is available in three distinct models: SO 300, SG 300 and SE 300.

Designed to close-couple to 215JP and 256JP frame electric motors, the models are also available as PumPAK®. Additional mounting options include pedestal.

Pump rotation in 90° increments.

SPECIFICATIONS:

Suction and Discharge	.. 3" x 2 1/2" 150# flange
Flow Up to 540 GPM
Head Feet Up to 190'
Impeller SE 300 - enclosed cast iron SG 300 - enclosed aluminum SO 300 - enclosed cast iron
Motor Up to 25
Drive Options Close coupled 215JP Close coupled 256JP Hydraulic motor 1.16 cu. in. Hydraulic motor 1.58 cu. in. Pedestal PumPAK® (without motor)
Seal SE 300 .. Type 2 viton/carbon/silicon carbide/SS SG 300. . Type 2 viton/carbon/silicon carbide/SS SO 300. . Type 21 viton/carbon/niresist/SS



Application:

- Agricultural
- Industrial
- Marine
- OEM

Compatible For:

- SE 300 - Ethanol, E 85
- SG 300 - Gasoline, Avgas, Kerosene, Jet A/8
- SO 300 - Biodiesel, Fuel Oil, Diesel

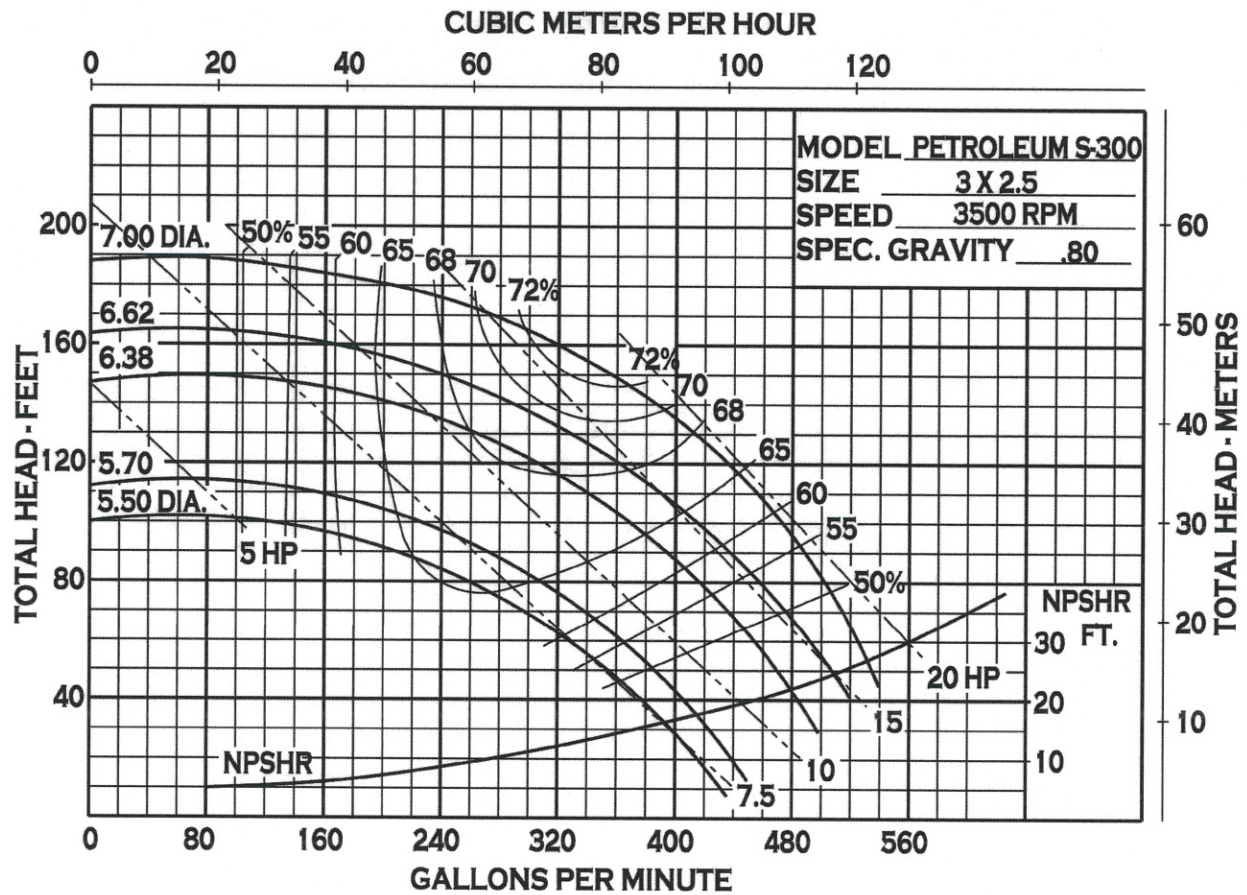
Features:

- Non-spark clamp

Mounting Options:

- SE 300 - Explosion proof Class 1 Group D
- SG 300 - Explosion Proof Class 1 Group D
- SO 300 - TEFC

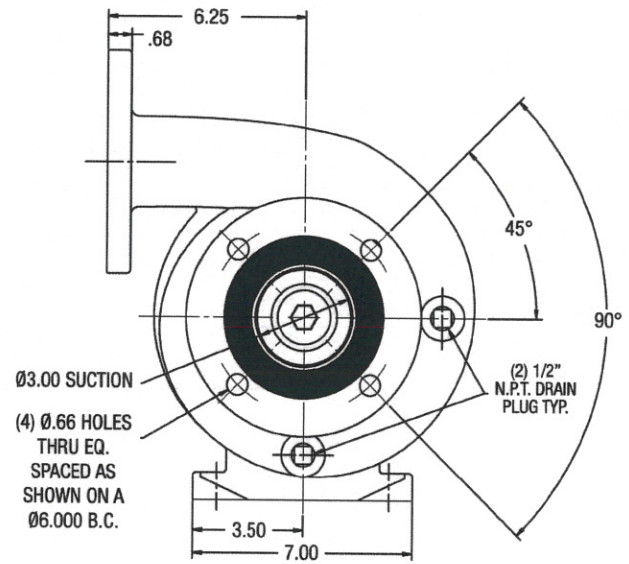
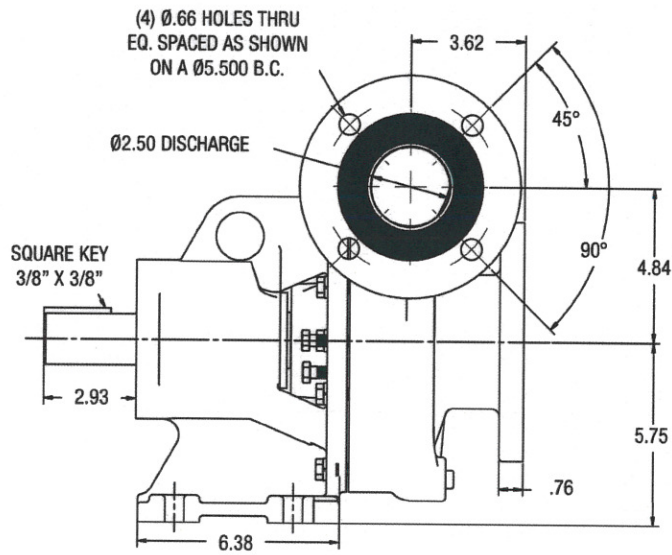
PETROLEUM 300



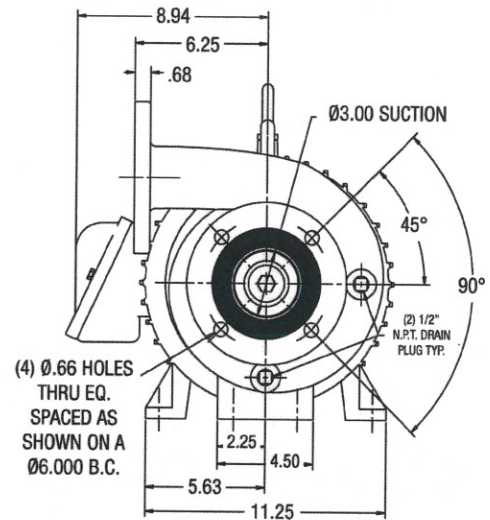
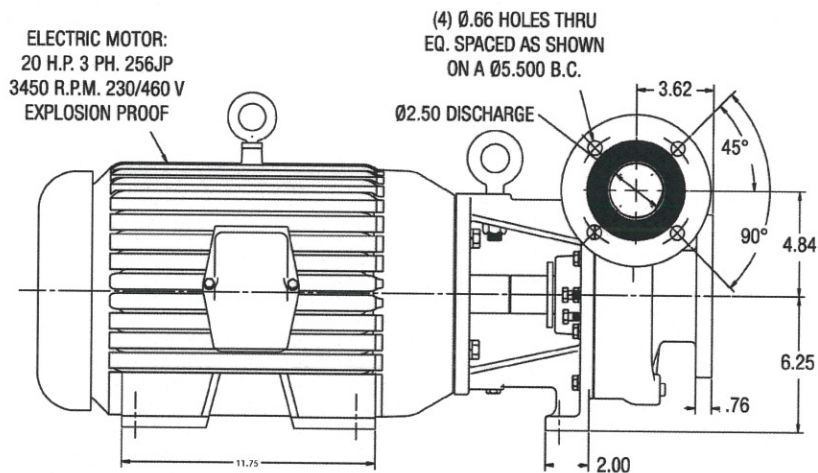
34800 BENNETT • FRASER, MI 48026-1686
 (586) 293-8240 • FAX (586) 293-8469
 (800) 563-8006 • www.mppumps.com

PETROLEUM 300

PEDESTAL-MOUNT

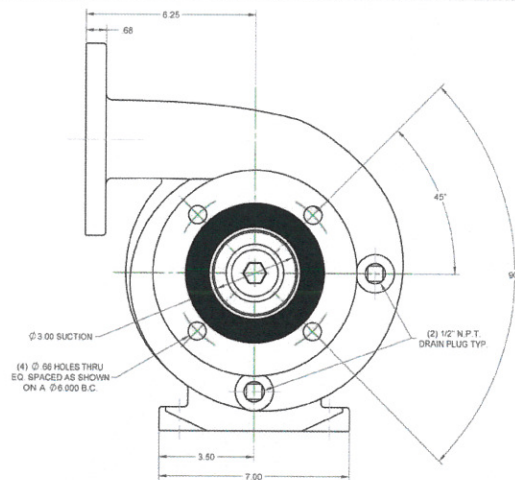


CLOSE COUPLED - ELECTRIC MOTOR

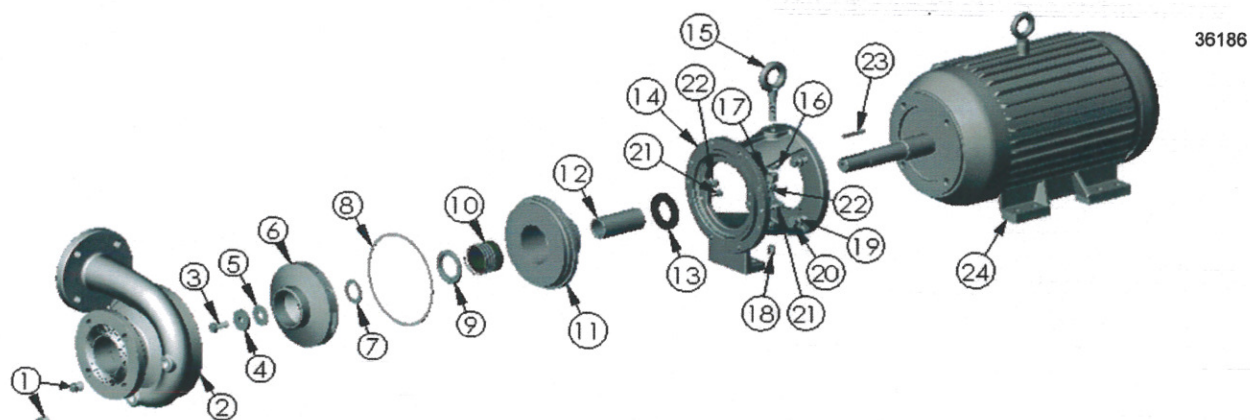


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CLOSE COUPLED - ELECTRIC MOTOR

[illegible]

PETROLEUM 300



ITEM NO.	PART NO.	DESCRIPTION	QTY.		ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	22656	PIPE PLUG - S.S.- 1/2" N.P.T.	2		13	26680	SLINGER - NEOPRENE	1
2	26733	HOUSING - DUCTILE IRON	1		14	26739	ADAPTER - CAST IRON	1
3	26674	SEAL BOLT - S.S. - 1/2-13	1		15	26686	EYE BOLT - STEEL	1
4	26675	WASHER - S.S.	1		16	26258	LOCKWASHER - STEEL - 5/8"	1
* 5	36156	GASKET - KLINGERSIL - C-4433	1		17	22461	HEXNUT - STEEL - 5/8-11"	1
6	26788	IMPELLER - CAST IRON - Ø7.00	1		18	21267	PIPE PLUG - S.S.- 1/4" N.P.T.	1
* 7	36157	GASKET - KLINGERSIL - C-4433	1		19	21254	LOCKWASHER - STEEL - 1/2"	4
* 8	26744	GASKET - KLINGERSIL - C-4433	1		20	21246	CAPSCREW - S.S. - 1/2-13	4
9	26972	SPRING HOLDER - S.S.	1		21	21274	CAPSCREW - S.S. - 3/8-16	14
* 10	35711	SEAL - 1.75" TYPE 2 - NRS	1		22	21266	LOCKWASHER - STEEL - 3/8"	10
11	26737	SEAL HOUSING - CAST IRON	1		23	26796	SQUARE KEY - S.S. - 1/4" X 1/4"	1
12	26678	SHAFT SLEEVE - S.S.	1		24	26805	ELE. MTR. - 20 H.P. - 3 PH. - 256JP 3450 R.P.M. - T.E.F.C.	1

*- RECOMMENDED REPLACEMENT PARTS



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(800) 563-8006 • www.mppumps.com



Vertical Filter Vessels **VF Series**

STANDARD DESIGN FEATURES

- 150 psi welded steel ASME Code construction.
- Choice of micron rating from 0.5 to 75 microns.
- Choice of pleated or depth type media.
- Epoxy coated interior, primed exterior.
- Buna-N O-ring cover seals.

RECOMMENDED OPTIONAL ACCESSORIES

- Automatic Air Eliminator
- Pressure Relief Valve
- Differential Pressure Gauge
- Drain Valve(s)
- Sampling Probes
- ASME Code Stamp

TYPICAL APPLICATIONS

Jet Fuels Diesel Fuels Gasoline

Consult our cartridge data sheets to select the micron rating and type of cartridge that is right for your application – PLF Series (pleated surface type filtration), FG Series (fiberglass depth type filtration), or **Aquacon®** Series (dehydration and filtration).

Filter vessels VF814 through VF844, such as the VF814150 shown at right, have through-bolt covers, NPT connections, and include fittings for drain, pressure gauge and air vent.

VF1614 and larger vessels, such as the VF2044150 shown at top right, are provided with swing bolt closure, RF flange connections and fittings for pressure gauge, air eliminator, pressure relief valve and drain valve.

Note: In applications where increased dirt contamination is present, it may be desirable to oversize filtration equipment. Contact Velcon for oversizing recommendations. For API/EI applications, please consult Velcon



VF2044150



VF814150

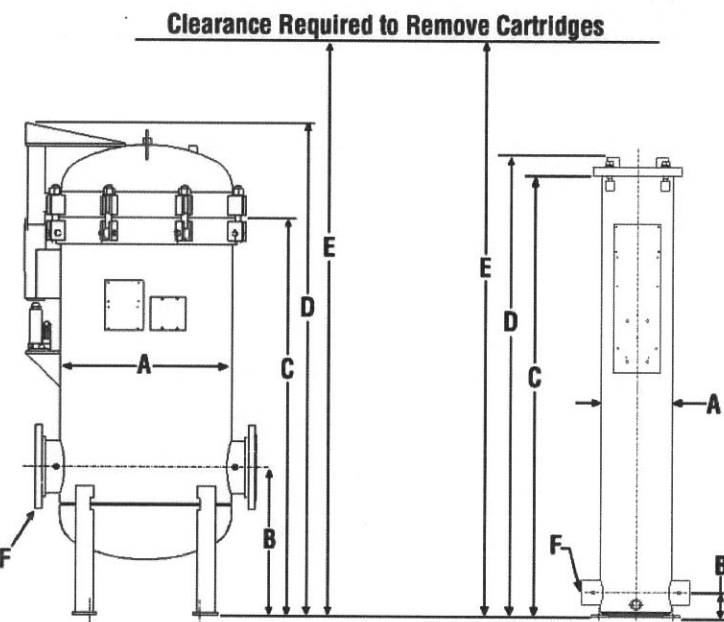
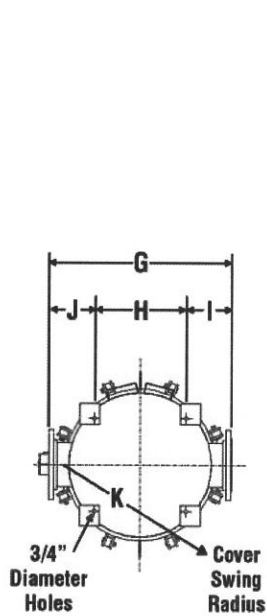


Figure 1

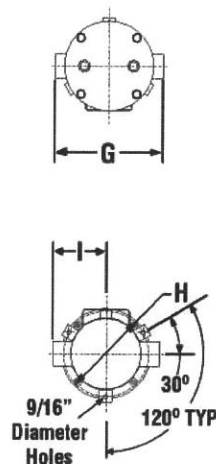


Figure 2

Vessel Model Number	Maximum Flow USGPM			FO Series Cartridges		Fig. No.	Dimensions in Inches											Weight with Skid, lbs.	Volume U.S. Gallons
	Jet Fuel	Gasoline	Diesel	Length	Qty.		A	B	C	D	E	F	G	H	I	J	K		
VF814	67	68	65	14	1	2	8 ⁵ / ₈	3	24 ³ / ₄	26 ³ / ₄	39	2	13	10 ³ / ₈	6 ¹ / ₂	-	-	225	5
VF829	133	136	130	29	1	2	8 ⁵ / ₈	3	39	41 ¹ / ₈	68	2	13	10 ³ / ₈	6 ¹ / ₂	-	-	265	8
VF844	200	204	195	44	1	2	8 ⁵ / ₈	3	57 ¹ / ₁₆	59 ⁷ / ₁₆	101	2	13	10 ³ / ₈	6 ¹ / ₂	-	-	305	11
VF1614	267	272	260	14	4	1	16	15	37 ¹³ / ₁₆	40 ¹³ / ₁₆	52	4	24 ¹ / ₄	9	7 ⁵ / ₈	7 ⁵ / ₈	18 ⁷ / ₁₆	500	22
VF1629	533	544	520	29	4	1	16	15	52 ¹³ / ₁₆	55 ¹³ / ₁₆	82	4	24 ¹ / ₄	9	7 ⁵ / ₈	7 ⁵ / ₈	18 ⁷ / ₁₆	560	35
VF1644	800	816	780	44	4	1	16	15	66 ³ / ₄	69 ³ / ₄	110	4	24 ¹ / ₄	9	7 ⁵ / ₈	7 ⁵ / ₈	18 ⁷ / ₁₆	620	48
VF2029	800	816	780	29	6	1	20	19 ¹ / ₂	60 ¹ / ₈	65 ⁵ / ₈	89	6	28	13	7 ¹ / ₂	7 ¹ / ₂	26	1000	67
VF2044	1200	1224	1170	44	6	1	20	19 ¹ / ₂	74 ⁵ / ₈	80 ⁷ / ₁₆	118	6	28	13	7 ¹ / ₂	7 ¹ / ₂	26	1100	88
VF2829	1600	1632	1560	29	12	1	28	24	48 ¹ / ₂	64 ¹ / ₄	77	8	36	18	9	9	35	1500	125
VF2844	2400	2448	2340	44	12	1	28	24	64 ³ / ₈	79 ³ / ₄	108	8	36	18	9	9	35	1600	165
VF3644	3600	3672	3510	44	18	1	36 ⁵ / ₈	26	63 ³ / ₈	84	109	10	48	23	12 ¹ / ₂	12 ¹ / ₂	44	2250	288
VF4244	5400	5508	5265	44	27	1	42 ³ / ₄	28	66	87 ³ / ₈	110	12	54	28	13	13	52 ¹ / ₄	3800	400

1. Flow rates are for FO-614PLF series pleated paper cartridges. For higher viscosity fluids, consult your Velcon Representative.
2. VF Series Filters are designed to accommodate our standard 6 in. O.D., 3¹/₂ in. I.D., 14¹/₂ in. long cartridges that are stacked one, two, or three high. Many cartridges are available in longer lengths that eliminate stacking. For example, a 44 inch long FO-644PLF1M could be used in place of three 14¹/₂ inch long cartridges. This makes for easier and less expensive changeouts.
3. A number of threaded base filter cartridges (e.g. FO-644PLF5TB) are available, which allow for easier cartridge changeout and removal of particulate matter from the deckplates. See data sheet #1549. The threaded base cartridges mount on the 6000T Adapters.
4. Dimensions shown are for estimating purposes only. For exact dimensions, obtain certified drawing.
5. VF16 and VF20 Series vessels have flat covers. VF16 Series vessels do not have hydraulic lift jacks.
6. Available **Aquacon**® Cartridges are AC-6xx05 and AD-6xx25 where xx represents cartridge lengths of 14, 29, and 44 inches.

Velcon

Velcon products are sold and serviced by a world-wide representative network. To order, contact Headquarters or your LOCAL REPRESENTATIVE:

COMPANY HEADQUARTERS:
Velcon Filters, LLC
1210 Garden of the Gods Road
Colorado Springs, CO 80907-3410
Phone: 1.800.531.0180 / 1.719.531.5855
Fax: 719.531.5690
e-mail: vlsales@velcon.com
www.velcon.com

MANUFACTURING PLANTS LOCATED AT:
Colorado Springs, Colorado
Sylacauga, Alabama
Henryetta, Oklahoma

OFFICES AND AFFILIATES IN:
Canada, Germany, Singapore, & Spain



**Liquid Filtration
and Separation
Specialists**



Specifications

M-25 Meters

Liquid Controls M and MA Series rotary motion positive displacement (PD) meters offer the ultimate in measurement accuracy for custody transfer of petroleum products, aviation fuels, LPG, and a broad range of industrial liquids.

Superior performance features

Low pressure drop - will operate on gravity flow or pump pressure.

Sustained accuracy - no metal-to-metal contact inside the measuring chamber means minimal wear and deterioration in accuracy over time, fewer recalibrations, and longer service life. Meters conform to NIST and International Weights and Measures accuracy requirements.

Wide viscosity range - LC meters can accurately meter products from less than 30 SSU (less than 1 centipoise) to 1,500,000 SSU (325,000 centipoise).

Maximum adaptability - choice of stock or custom elbows/fittings provides unequaled mounting flexibility to meet widely varying installation requirements.

Accuracy/Performance*

Repeatability

Mechanical registration: capable of 0.05% of reading over entire range
Electronic registration: capable of 0.03% of reading over entire range

Linearity

Over 5:1 range

Mech. registration: capable of $\pm 0.125\%$ or better from max. nom. flow rate
Elect. registration: capable of $\pm 0.10\%$ or better from max. nom. flow rate

Over 10:1 range

Mech. registration: capable of $\pm 0.22\%$ or better from max. nom. flow rate
Elect. registration: capable of $\pm 0.10\%$ or better from max. nom. flow rate

Over 40:1 range

Mech. registration: capable of $\pm 0.5\%$ or better from max. nom. flow rate
Elect. registration: capable of $\pm 0.15\%$ or better from max. nom. flow rate

Temperature range

-40° F to 160° F (-40° C to 71° C)

*Stated accuracy obtainable when all variables remain constant. Reading/measurements reflect a minimum of one minute of flow at selected rate(s). All accuracy statements based on metering safety solvent (aliphatic hydrocarbon), approximate viscosity 1 CPS. On higher viscosity products, the average deviation in accuracy will be less.

**LIQUID
CONTROLS**
A Unit of IDEX Corporation

IDEX
IDEX CORPORATION

Industries served

LC M and MA series meters are well suited for use in industries requiring precise flow measurement and reliable, extended service life:

- Refined petroleum products
- Aviation fuels
- LPG
- Agricultural chemicals
- Paints and coatings
- Foods and beverages
- Petrochemicals
- Pharmaceuticals
- Cosmetics
- Printing Inks
- Textiles

Construction

Meter housing and rotors

Cast aluminum (other metalurgies available including brass, cast-iron and stainless steel)

Internal components

Aluminum, Ni-Resist, stainless steel

Seal materials

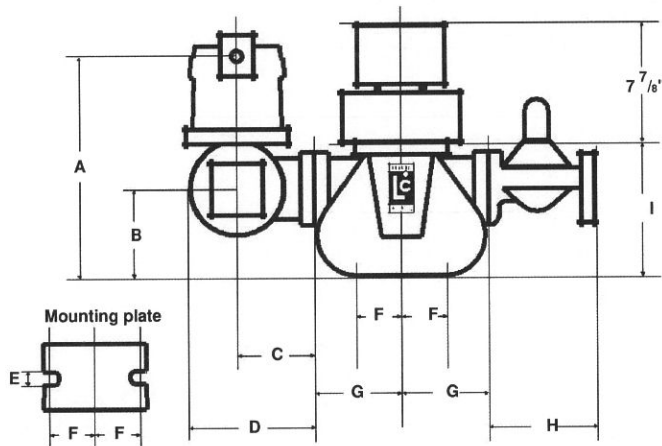
UL recognized component: Buna-N, Viton[®] 1, Teflon[®] 1

Bearings

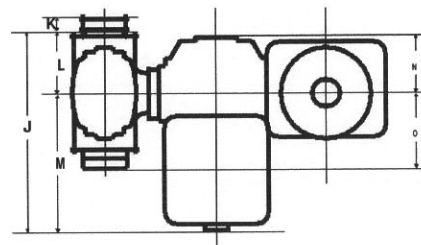
Carbon, Teflon, Ni-Resist

¹Viton and Teflon are registered trademarks of DuPont Corporation.

Front View



Top View



Dimensions: flow meters with electronic registration

Note: Dimensions shown are not for construction use. Consult factory when certified engineering prints are required.

Model	Flange size	Max. nom. Flow rate	Working pressure	Dimensions																Net Wt
					A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
M-25	3"	300 GPM (1100 L/min)	150 PSI (10.5 BAR)	in	17	7.5	5	7.7	0.69	3.8	5.5	n/a	10.8	16.1	1.3	5	11.1	5.1	6.5	37 lbs (16.8 kg)
				mm	432	191	127	195	17	95	140	n/a	273	410	32	127	283	129	165	

Ordering Information

Model : _____ - _____ - _____ - _____

Description : _____

Flow rates: Max. _____ Normal _____ Min. _____

Operating temperatures: Max. _____ Normal _____ Min. _____

Maximum non-shock operating pressure: _____

Maximum viscosity: _____ @ _____ (Temp °F or C)

Specific gravity: _____ @ _____ (Temp °F or C)

Construction class: (1, 2, etc.) _____

Seal material: ☐ Standard Buna/Viton ☐ All Viton ☐ All Teflon

Direction of flow: ☐ L to R ☐ R to L

Read out: ☐ Gallons ☐ Liters ☐ Pounds ☐ Other _____

Mechanical counter and print: ☐ Zero/Face up ☐ Zero/Face down ☐ Accumulative

Strainer basket ☐ 40M ☐ 80M ☐ 100M ☐ Other _____

Flange size: _____

Flange type: ☐ NPT ☐ BSPT ☐ Slip weld ☐ ANSI ☐ DIN ☐ Other _____

Options: _____

Class Description

- | | |
|---|----------------------------|
| 1 | Refined petroleum products |
| 2 | Aviation and jet fuel |

Bearing Material

- | |
|------------------------|
| Ni-Resist ¹ |
| Ni-Resist ¹ |

¹ Carbon bearings are standard on some meter sizes of this class. Consult factory.



LIQUID CONTROLS

A Unit of IDEX Corporation
105 Albrecht Drive
Lake Bluff, IL 60044-2242
1.800.458.5262 847.295.1050
Fax: 847.295.1057
www.lcmeter.com

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(07/03)



Civacon Model 8580 Diagnostic Opti-Therm Rack Monitor from OPW-ES

The Model 8580 has been engineered to automatically recognize the type of overfill system (optic or thermistor-signal technology) that is being used on a transport. When connected to the transport, the monitor checks the status of the tank or compartment's sensors and provides automatic warning of an overfill event if predetermined product levels are exceeded.



FEATURES & BENEFITS

- High-resolution 3" x 5" LED diagnostic display
- Easy-read display eliminates errors
- Two output relays for overall and ground verification for maximum flexibility and safety
- Compatible with all 5-wire Optic (up to 12 sensors), Thermistor and 2-wire Thermo-Optic sensors (up to 8 sensors each)
- Capable of loading all trailers equipped with up to 12 sensors, no matter the brand/style of overfill-detection system
- 0.5-second maximum response time
- Automatic switching operation eliminates need for manual setting
- Wireless handheld bypass controller
- Diagnostic capabilities include ground verification, permissive status and compartment identification
- "Plug & Play" operation with no configuration programming required

SPECIFICATIONS

Product #: 8580
Operating Temperature: -40°F to 140°F (-40°C to 60°C)
Input Requirements: 120 VAC 60 Hz, 15VA (Standard) - 240 VAC available — please inquire
Output Relay Contacts: 240 VAC — 5A DPST x 4
Response Time: 0.5 seconds maximum, dry to wet transition
Electrical Connections: Internal Terminal Strips, RS-485 communication
Enclosure: NEMA 4 and NEMA 7 explosion-proof, Class I, Div. 1, Group C & D
Housing Material: Aluminum
Approximate Weight: Model 8580 — 43 lbs
Approvals: UL, CUL (Canada); CENELEC (Europe)
Installation Information: Provided with the monitor. Can also be accessed and downloaded via website.



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2726 Henkle Dr. | Lebanon, OH | 45036
T: 1-800-547-9393 | F: 513-932-9845
www.opw-es.com



Civacon Cane Probe from OPW-ES

Civacon Cane Probes provide a portable and flexible solution for meeting overfill requirements, with a universal clamp that has been designed to easily and securely attach to petroleum or chemical manholes, making it the ideal solution when a permanent sensor cannot be affixed to a tank or railcar.



FEATURES & BENEFITS

- Compatible with all product and environmental temperature fluctuations
- Four standard sizes: 20", 36", 48" and 60"
- Three styles available:
 - Clamp-type for open-dome sensing
 - Kamlok®-type for closed systems
 - Universal-type for both chemical domes and petroleum manholes
- Coiled cord and 7-way plug attach easily to probe junction box
- Easy removal for transfer to another loading point
- Rugged prism-guard design protects optic sensor
- 5-wire optic format
- Modular design requires no hard-wiring
- Teflon® seals for optimum sensor life
- Stainless-steel construction resists corrosion

SPECIFICATIONS

Level Repeatability: + 1/16 inch

Electrical Connections: Industry standard 7-pin connector

Materials: Stainless Steel, Teflon® seals, Glass Prism

Temp. Range: -40°F to 158°F (-40°C to 70°C)

Installation Information: Provided with the probe. Can also be accessed and downloaded via website.

PRODUCT	PRODUCT #	DESCRIPTION
CANE PROBE (select 1)	1300HS-3062	Optic Cane Probe (Aluminum) 62" standard length with universal clamp, 30' coiled cord and 7-pin plug
	1300KMLS-3062	Optic Cane Probe (Aluminum) 62" standard length with Kamlok® Coupler, 30' coiled cord and 7-pin plug
	1400RHS-3060	Optic Cane Probe (Stainless Steel) 60" standard length with universal clamp, 30' coiled cord and 7-pin plug
	1400RKMLS-3060	Optic Cane Probe (Stainless Steel) 60" standard length with Kamlok® Coupler, 30' coiled cord and 7-pin plug



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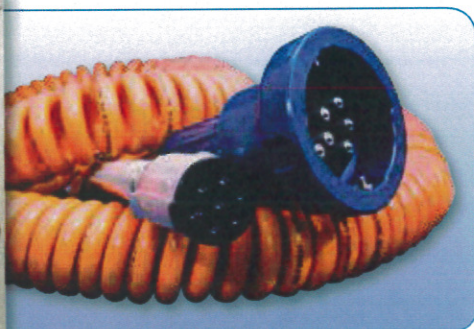


Civacon Plug & Cord Set from OPW-ES

The Civacon Plug & Cord Set has been designed to prevent equipment damage while saving operators the time and money that can be lost as a result of unplugged driveaways. The Breakaway Plug & Cord Set utilizes high-quality, corrosion-resistant materials for reliable long-life operation.



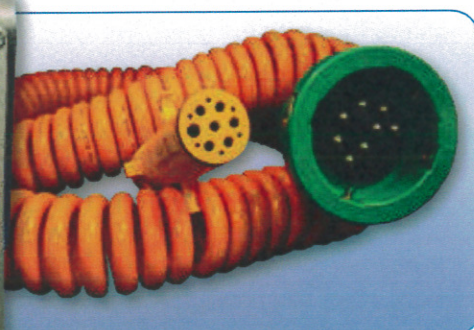
Junction Box 7540-7540



Plug & Cord 7120-7120



Junction Box 7510T-7510



Plug & Cord 7320-7320

FEATURES & BENEFITS

- Lightweight molded plug for ease of installation/use/handling
- Stainless-steel contact pins for enhanced corrosion-resistance
- Heavy-gauge spring behind contact pins ensures strong, reliable electrical connections
- 18-gauge tinned wire fights corrosion
- 30-foot coiled-cord length for high-visibility, ease of use and safety
- Color-coded wiring for ease of identification/installation
- Stainless-steel interlock screws with 3/4 opening for easy replacement of the plug cord

SPECIFICATIONS

Operating Temperature: -40°F to 158°F (-40°C to 70°C)

Materials: Plug Body - Urethane Rubber, Contact Pins - Stainless Steel, Cable - ?

Type: SJO

Jacket: Viscosity Fuel Resistant

Length Retracted: 5'

Length Extended: 30'

Wire Size: 18 gauge

PRODUCT	PRODUCT #	DESCRIPTION
PLUG & CORD (select thermistor or optic)	7100-7100	Optic Plug with 30' 10-conductor coiled cord
	7120-7120	Optic Plug with 30' 10-conductor coiled cord and 7-pin breakaway plug
	7100SR-7100	Optic Plug with 30' 6-conductor blue coiled cord for Scully replacement
	7120SR-7120	Optic Plug with 30' 6-conductor blue coiled cord for Scully replacement and 7-pin breakaway plug
	7300-7300	Thermistor Plug with 30' 10-conductor coiled cord
	7300C-7300	Thermistor Plug with 30' 10-conductor coiled cord (Canada only)
	7320-7320	Thermistor Plug with 30' 10-conductor coiled cord and 13-pin breakaway plug
	7300SR-7300	Thermistor Plug with 30' 10-conductor coiled cord for Scully replacement
	7320SR-7320	Thermistor Plug with 30' 10-conductor coiled cord for Scully replacement and 13-pin breakaway plug
JUNCTION BOX	7500-7500	Junction Box for Optic, Thermistor and Ground Verification Plug and Cord Sets (Non-Breakaway)
	7540-7540	Junction Box with 7-pin socket for Cane Probes or Breakaway Optic Plug & Cord Set
	7510T-7510	Junction Box with 13-pin socket for breakaway Thermistor Plug & Cord Set



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